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Large Employment for International Peace

Foreword by the Honorable Earl S. Duffell
President of the United States

PRELIMINARY ECONOMIC STUDIES OF THE WAR

EDITED BY
HAROLD K. SMITH

WAR ADMINISTRATION OF THE RAILWAYS IN THE UNITED STATES AND GREAT BRITAIN

FRANK DOUGLAS DIXON

Professor of Economics, University of California,
and Director, Bureau of Railway Economics

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Carnegie Endowment for International Peace

DIVISION OF ECONOMICS AND HISTORY
JOHN BATES CLARK, DIRECTOR

PRELIMINARY ECONOMIC STUDIES OF THE WAR

EDITED BY

DAVID KINLEY

Professor of Political Economy, University of Illinois
Member of Committee of Research of the Endowment

WAR ADMINISTRATION OF THE RAILWAYS IN THE UNITED STATES AND GREAT BRITAIN

BY

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AND

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Statistician, Bureau of Railway Economics



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*The battle of the Marne was won by the railways of
France . . . This is a railway war.*

MARSHAL JOFFRE

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Preliminary Economic Studies of the War

EARLY ECONOMIC EFFECTS OF THE EUROPEAN WAR UPON CANADA, by Adam Shortt, formerly Commissioner of the Canadian Civil Service, now Chairman, Board of Historical Publications, Canada.

EARLY EFFECTS OF THE EUROPEAN WAR ON THE FINANCE, COMMERCE, AND INDUSTRY OF CHILE, by Leo S. Rowe, Professor of Political Science, University of Pennsylvania.

ECONOMIC EFFECTS OF THE WAR UPON WOMEN AND CHILDREN IN GREAT BRITAIN, by Irene Osgood Andrews, Assistant Secretary of the American Association for Labor Legislation.

WAR ADMINISTRATION OF THE RAILWAYS IN THE UNITED STATES AND GREAT BRITAIN, by Frank H. Dixon, Professor of Economics, Dartmouth College, and Julius H. Parmelee, Statistician, Bureau of Railway Economics.

EFFECTS OF THE WAR UPON INSURANCE, WITH SPECIAL REFERENCE TO THE SUBSTITUTION OF INSURANCE FOR PENSIONS, by William F. Gephart, Professor of Economics, Washington University, St. Louis.

GOVERNMENT WAR CONTROL OF INDUSTRY AND TRADE, WITH SPECIAL REFERENCE TO GREAT BRITAIN AND THE UNITED STATES, by Charles Whiting Baker, New York City.

WAR ADMINISTRATION OF GREAT BRITAIN AND THE UNITED STATES, SHOWING CHANGES IN GOVERNMENTAL ORGANIZATION CAUSED BY THE WAR, by John A. Fairlie, Professor of Political Science, University of Illinois.

EFFECTS OF THE WAR UPON LABOR CONDITIONS AND ORGANIZATION, WITH SPECIAL REFERENCE TO GREAT BRITAIN AND THE UNITED STATES, by Matthew B. Hammond, Professor of Economics, Ohio State University.

WAR FINANCE AND TAXATION, ESPECIALLY IN GREAT BRITAIN AND THE UNITED STATES, by Frank L. McVey, President, University of Kentucky.

EFFECTS OF THE WAR ON NEGRO LABOR AND MIGRATION IN THE UNITED STATES, by Emmett J. Scott, Secretary of Tuskegee Institute.

EFFECTS OF THE WAR ON SHIPPING, by J. Russell Smith, Professor of Industry, University of Pennsylvania.

AGRICULTURAL PRODUCTION AND FOOD CONTROL IN GREAT BRITAIN AND THE UNITED STATES, by Benjamin H. Hibbard, Professor of Agricultural Economics, University of Wisconsin.

PRICE CONTROL IN GREAT BRITAIN AND THE UNITED STATES, by David Kinley, Professor of Political Economy, University of Illinois, and Simon Litman, University of Illinois.

ECONOMIC AND SOCIAL EFFECTS OF GOVERNMENT CONTROL OF THE LIQUOR BUSINESS, WITH SPECIAL REFERENCE TO GREAT BRITAIN AND THE UNITED STATES, by Thomas Nixon Carver, Professor of Political Economy, Harvard University.

TRAINING OF DISABLED SOLDIERS AND SAILORS FOR ECONOMIC USEFULNESS, by Edward T. Devine, Professor of Social Economy, Columbia University.

INTRODUCTORY NOTE BY THE DIRECTOR

The Division of Economics and History of the Carnegie Endowment for International Peace is organized to "promote a thorough and scientific investigation of the causes and results of war." In accordance with this purpose a conference of eminent statesmen, publicists, and economists was held in Berne, Switzerland, in August, 1911, at which a plan of investigation was formed and an extensive list of topics was prepared. An elaborate series of investigations was undertaken, and, if the war had not intervened, the resulting reports might have been expected, before the present date, in printed form.

Of works so undertaken some aim to reveal direct and indirect consequences of warfare, and thus to furnish a basis for a judgment as to the reasonableness of the resort to it. If the evils are in reality larger and the benefits smaller than in the common view they appear to be, such studies should furnish convincing evidence of this fact and afford a basis for an enlightened policy whenever there is danger of international conflicts.

Studies of the causes of warfare reveal, in particular, those economic influences which in time of peace bring about clashing interests and mutual suspicion and hostility. They show what policies, as adopted by different nations, reduce the conflicts of interest, inure to the common benefit, and afford a basis for international confidence and good will. They tend, further, to reveal the natural economic influences which of themselves bring about more and more harmonious relations and tend to substitute general benefits for the mutual injuries that follow unintelligent self-seeking. Economic internationalism needs to be fortified by the mutual trust that just dealing creates; but just conduct itself may be favored by economic conditions. These, in turn, may be created partly by a natural evolution and partly

by the conscious action of governments; and both evolution and public action are among the important subjects of investigation.

An appeal to reason is in order when excited feelings render armed conflicts imminent; but it is quite as surely called for when no excitement exists and when it may be forestalled and prevented from developing by sound national policies. To furnish a scientific basis for reasonable international policies is the purpose of some of the studies already in progress and of more that will hereafter be undertaken.

The war has interrupted work on rather more than a half of the studies that were in progress when it began, but it has itself furnished topics of immediate and transcendent importance. The costs, direct and indirect, of the conflict, the commercial policies induced by it and, especially, the direct control, which because of it, governments are now exercising in many spheres of economic activity where formerly competition and individual freedom held sway, are phenomena that call, before almost all others, for scientific study. It is expected that most of the interrupted work will ultimately be resumed and that, in the interim before this occurs, studies of even greater importance will be undertaken and will be pushed rapidly toward completion.

The publications of the Division of Economics and History are under the direction of a Committee of Research, the membership of which includes the statesmen, publicists, and economists who participated in the Conference at Berne in 1911, and two who have since been added. The list of members at present is as follows:

Eugène Borel, Professor of Public and International Law in the University of Geneva.

Lujo Brentano,¹ Professor of Economics in the University of Munich; Member of the Royal Bavarian Academy of Sciences.

Charles Gide, Professor of Comparative Social Economics in the University of Paris.

¹Membership ceased April 6, 1917, by reason of the declaration of a state of war between the United States and the Imperial German Government.

H. B. Greven, Professor of Political Economy and Statistics in the University of Leiden.

Francis W. Hirst, London.

David Kinley, Professor of Political Economy in the University of Illinois.

Henri La Fontaine, Senator of Belgium.

His Excellency Luigi Luzzatti, Professor of Constitutional Law in the University of Rome; Secretary of the Treasury, 1891-3; Prime Minister of Italy, 1908-11.

Gotaro Ogawa, Professor of Finance at the University of Kyoto, Japan.

Sir George Paish, London.

Maffeo Pantaleoni, Professor of Political Economy in the University of Rome.

Eugen Philippovich von Philippsberg,¹ Professor of Political Economy in the University of Vienna; Member of the Austrian Herrenhaus, Hofrat.

Paul S. Reinsch, United States Minister to China.

His Excellency Baron Y. Sakatani, recently Minister of Finance; present Mayor of Tokio.

Theodor Schiemann,² Professor of the History of Eastern Europe in the University of Berlin.

Harald Westergaard, Professor of Political Science and Statistics in the University of Copenhagen.

Friedrich Freiherr von Wieser,³ Professor of Political Economy in the University of Vienna.

The function of members of this Committee is to select collaborators competent to conduct investigations and present reports in the form of books or monographs; to consult with these writers as to plans of study; to read the completed manuscripts and to inform the officers of the Endowment whether they merit publication in its series. This editorial function does not com-

¹Died, June, 1917.

²Membership ceased April 6, 1917, by reason of the declaration of a state of war between the United States and the Imperial German Government.

³Membership ceased December 7, 1917, by reason of the declaration of a state of war between the United States and Austria-Hungary.

mit the members of the Committee to any opinions expressed by the writers. Like other editors, they are asked to vouch for the usefulness of the works, their scientific and literary merit, and the advisability of issuing them. In like manner the publication of the monographs does not commit the Endowment as a body or any of its officers to the opinions which may be expressed in them. The standing and attainments of the writers selected afford a guarantee of thoroughness of research and accuracy in the statement of facts, and the character of many of the works will be such that facts, statistical, historical, and descriptive, will constitute nearly the whole of their content. In so far as the opinions of the writers are revealed, they are neither approved nor condemned by the fact that the Endowment causes them to be published. For example, the publication of a work describing the attitude of various socialistic bodies on the subject of peace and war implies nothing as to the views of the officers of the Endowment on the subject of socialism; neither will the issuing of a work, describing the attitude of business classes toward peace and war, imply any agreement or disagreement on the part of the officers of the Endowment with the views of men of these classes as to a protective policy, the control of monopoly, or the regulation of banking and currency. It is necessary to know how such men generally think and feel on the great issue of war, and it is one of the purposes of the Endowment to promote studies which will accurately reveal their attitude. Neither it nor its Committee of Research vouches for more than that the works issued by them contain such facts; that their statements concerning them may generally be trusted, and that the works are, in a scientific way, of a quality that entitles them to a reading.

JOHN BATES CLARK,
Director.

EDITOR'S PREFACE

This account by Professor Dixon and Mr. Parmelee of the war administration of the railways in Great Britain and the United States to date is one that should be of great interest and helpfulness to our own government and people at the present crisis. The British record is much longer than our own, since the government of that country took over the railways practically at the beginning of the war. The account given by the authors of the operation of these railways under government administration shows that a very high degree of efficiency has been attained. To be sure the plan of operations had been framed years before, but the smoothness with which it has worked is evidence of its wisdom.

It is clear from the account that the British railways have been highly efficient under government management for the purposes of the war, but it will be hasty to conclude that similar efficiency under government operation could be attained in normal times of peace. In war time the only efficiency of importance is the prompt transport of large quantities of certain definite and well known classes of goods and of passengers. Efficiency in peace time for the railroads is of a different character. It involves a combination of services or satisfactions to the patrons of the railroad, some phases of which are absent in the simpler problem of war transportation. The traffic of the railroads is then more largely differentiated, both in freight and passenger service. The service must be of a character to satisfy a multitude of different conditions, tastes, and requirements of individuals. On the passenger side, moreover, the contentment and prejudices of travelers must be catered to, and the efficiency of a railroad is measured in part by its success in satisfying these. The beauty of the scenery, the frequency of the trains, the care expended on stations and surrounding grounds, and a multitude of other things must be thought of in the traffic of ordinary peace times, all of which may

be neglected in war. In short, the problem of securing efficiency, or success in meeting prevailing conditions, is a much more complex one, and it is more than doubtful whether it could be solved by government officials working according to routine.

The story told has many lessons for us both in the present and the immediate future in the management of our railroads. If, with our larger railway system, we do as well as the British, we may feel satisfied.

The authors, needless to say, have done their work well.

DAVID KINLEY,
Editor.

FOREWORD

This monograph is subject to all the limitations that arise when one attempts to write history *in medias res*.

In Great Britain a law had been on the statute book since 1871 which provided for the method of railway management in case of war and for the financial arrangement under which the railways should be operated. The organization of railway executives which is now operating the British railways had been in existence since 1896. Therefore, it was a relatively simple matter to put the machinery in motion when the emergency arose and there have been few problems since of a fundamental character. Yet even so it would be impossible to say that our description is altogether complete or well balanced and that it does not fail to present some significant fact or phase of the situation. Many gaps will be discovered that are due to the impossibility of obtaining information during the war, and especially to the silence of the British government regarding many of its internal dealings under war conditions.

As for the United States, no preparation had been made for railway participation in war until a few months before our entrance into it, beyond such experience as was carried over from our failures of the Spanish War and from our transportation of militia to the border in the summer of 1916. Railways built on a competitive principle were compelled overnight to devise a scheme of cooperation. It is with this period of voluntary cooperation that this monograph is concerned. It closes with the recommendations to Congress for a greater unification of railway management. The authors have attempted nothing beyond a simple narrative. In these times, when the unprecedented happening is a daily occurrence, one would be bold indeed who attempted conclusions from incomplete data or ventured even a step into the realm of prophecy.

THE AUTHORS.

December 7, 1917.

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PART I—THE UNITED STATES

WAR ADMINISTRATION OF THE RAILWAYS IN THE UNITED STATES AND GREAT BRITAIN

CHAPTER I

Introduction

Dependence of a nation upon its transportation system in time of war has come to be almost complete. If the transportation system is in time of peace the vital current along which flows the life blood of a nation's economic activities, even more vital and essential is it to a nation struggling for very existence in time of war.

Study of modern transportation systems under war conditions, therefore, can not but prove absorbingly interesting and useful. The utility of railways in war may be studied under two striking aspects: first, the military or strategic aspect, which concerns the utilization of railways within or bordering upon the war zone, and second, the economic aspect, which deals with territory remote from the scene of actual fighting, although closely related to military operations. In a region where fighting is under way, the line between military and economic activity on the part of the railways is often difficult to draw, for all transportation operations are then subordinated to military considerations; the nearer a railway to the war zone, the more wholly submerged are its economic as contrasted with its military operations.

In France, for example, the railways have played a dual part since the beginning of the war. North and northeast of Paris the railways have been included in a war zone (*zone des armées*), the boundaries of which were drawn by the government around

certain of the departments. In this zone the railway has been subordinated almost wholly to the demands of the military. Part of the northeastern railway systems of France have, indeed, been completely submerged for the time being, owing to enemy occupation. In the remaining departments of France the railways have had more clearly the second aspect, namely, that of economic support of military operations. In the pursuit of this economic activity, while the railways are constantly engaged in the transportation of troops and military supplies they are working at greater distances from the front and without the terrific pressure under which operations are necessarily carried forward in the war zone proper. Furthermore, a considerable part of their work has consisted in handling ordinary commercial goods, raw materials, finished products and the like, and in the transportation of non-military traffic and passengers.

The United States, having been wholly separated from the region of conflict, has been concerned solely with the economic service of the railways with such modification as has been compelled by the transportation of troops and supplies to the ports of embarkation and the army camps. For the period here under consideration the railways have been operated by their own executives under a system of voluntary cooperation with relatively little interference and with no aid whatever from the federal government.

Great Britain has been fortunate in her virtual freedom from that invasion to which Belgium, France, Serbia, Russia, Roumania and Italy have all been subjected. Her railway system may, therefore, be regarded as falling more particularly into the second, or economico-military, group. The British railway system has been welded together by governmental order from the very beginning of the war, being operated throughout as a single unit; and while railway activity has been largely subordinated to considerations of troop and supply transportation, yet this activity has been comparatively free from the serious and tragic problems confronting the railways of France. Invasion not only results in military and political changes of profound significance,

but also by undermining the economic structure upsets the whole transportation organization. England's freedom from invasion has left her free to experiment on a large scale with a system of private railway operation under government control.

CHAPTER II

Historical Development

While no such close relationship between the government and the railways existed at the time of our entrance into the European War as was to be found in Great Britain, yet we were not without experience in the use of transportation facilities for military purposes. In fact, the relationship of government and carriers in earlier conflicts in this country has been of sufficient importance to furnish a sound basis of experience upon which to build a structure of railway operation for the present conflict. It will be profitable, therefore, briefly to review this relationship historically.

Our first conflict after the introduction of railways was the Mexican War. It is not possible to say that railways were never employed during the period of that conflict, but it can be stated without fear of contradiction that they played no significant part in the mobilization of troops and no part whatever in actual troop movements. Although the quartermaster general refers frequently in his annual reports to the various facilities of transportation, purchased and hired, he makes no mention whatever of railways. This is not strange when one recalls that the concentration of troops was effected on the lower Rio Grande, at San Antonio, Texas, and at Fort Leavenworth on the Missouri. This was in 1846. Four years later we had in the entire United States only 9,000 miles of railway, of which over 5,000 miles were found in New England, New York, Pennsylvania and Ohio. Texas, Arkansas and Tennessee had not a mile, and all the Gulf States combined possessed only 350 miles. From Fort Leavenworth to Santa Fe mules, oxen and horses were the motive power, wagons and pack animals the vehicles; and troops farther east came by transport down the Mississippi and coastwise from Atlantic ports. It was not until two years after the close of this

war that Congress made its first important land grant in aid of railways—that to the Illinois Central—in which provision was made for the transportation of property and troops of the United States.

The situation at the opening of the Civil War was quite different. Railroad building had been rapid in the decade 1850–1860 and the mileage had more than trebled. It was almost exclusively confined to the territory east of the Mississippi, which was the area from which most of the troops were drawn, and the scene of many of the conflicts. The territory to be covered by army mobilizations and troop movements was so extended, and alternative means of transportation in the territory between the Mississippi and the Atlantic coast so meager, if not altogether absent, that the railways became an essential part of the military organization. In fact it is generally conceded by students of military history that the American Civil War was the first great military conflict in which railways were a significant factor.

To the possibilities of such a relationship between military government and railways, attention had been given during the previous decade. As early as 1824 a grant of land for canal purposes in Indiana had provided that the waterway should be “a public highway for the use of the government of the United States free from any toll or charge whatever for any property of the United States or persons in their service.” Whether the government had military transportation in mind in the insertion of this clause, it is impossible to say. But it is significant that in the grant of land to the Illinois Central Railroad Company in 1850—the first of the great railway land grants—the word “troops” should be substituted for “persons.” Thereafter in railway land grants, the following clause from that charter was repeated with scarcely ever an alteration in wording :

Said railroad and branches shall be and remain a public highway for the use of the government of the United States, free from toll or other charge upon the transportation of any property or troops of the United States.

This provision became the occasion for serious controversy that ended only with a Supreme Court decision, but this was a decade after the Civil War had closed.¹ A considerable proportion of the land grants was not made, or, if made, the land did not come into possession of operating railways, until the war was over. Moreover, whatever may have been in the mind of Congress when it enacted this provision, and it seems clear that Congress intended to secure free transportation for its property and troops, it was quickly realized when war was on that roads could handle such traffic free only at a very considerable sacrifice, and that the generous spirit in which the railways offered their services to the government should be met by a corresponding generosity on the part of the government. In 1861, the Secretary of War made the following statement to the president of the Illinois Central: "It has been decided by this department that the clause in your charter gives a clear right to . . . the use of your roadway without compensation. . . . As a proper compensation for motive power, cars and all other facilities incident to transportation, two cents per mile will be allowed for passenger travel, subject to a discount of thirty-three and a third per cent, as due to government for charter privileges." He also stated that a reasonable charge for freight would be allowed, subject to a similar discount.

The function of the railways in this conflict was not alone that of transporting troops and supplies but perhaps of even greater importance, the maintenance and development of our industrial activities from which the war was to gather its sustenance. In the region of actual conflict, railways became a factor in military strategy and were built and destroyed according to the exigencies of the situation. That the authorities realized the important part railways were to play is evident from the fact that Secretary of War Cameron appointed as his assistant Vice President Scott of the Pennsylvania Railroad.

No uniform and comprehensive policy of commandeering by the government was undertaken, the general rule being to leave

¹ See page 11.

railways in private hands unless the situation called for more drastic action. This decision was doubtless influenced by the attitude of the railways themselves which in large part placed their facilities unreservedly at the disposal of the government.

As early as 1861, interruption of communication made it necessary for the Secretary of War to take possession of such portions of the railways as were necessary to the restoration of a connection between Washington and the North. This was done purely as a war measure and without express authorization of Congress, and the lines were returned to their owners before the situation was reported to Congress. Although the war power of the President was probably ample, more specific authority seemed desirable.

The first statute of the kind enacted to meet war exigencies was the law of January 31, 1862, passed in response to this desire. It authorized the President, when in his judgment the public safety might require, to take possession of all railroad lines, including rolling stock, buildings and all appurtenances, to prescribe regulations for using and maintaining them, "to extend, repair and complete" them in a manner most conducive to the safety and interest of the government, to place under military control all officers, agents, and employes "so that they shall be considered as a post road and a part of the military establishment of the United States, subject to all the restrictions imposed by the rules and articles of war." Three commissioners were to be appointed by the President to assess the damages and determine the compensation to which the railroad might be entitled as a result of seizure, and their award was to be submitted to Congress for its action. The transportation of troops and military property was to be under the supervision of the Secretary of War. The operation and use of the railways by the federal authorities was not to extend beyond the time necessary for the suppression of the rebellion.

The purpose expressed in the last sentence was clearly brought out in debate. This was exclusively a war measure. The power of the President was to be exercised only under the pressure of

military necessity, when an important line of communication had broken down, or was in the hands of the enemy. That Congress was determined so to limit the interpretation of the act was shown by the passage during the same session, in July, 1862, of a joint resolution declaring that the act should not be so construed as to authorize the construction of any railroad or the completion of any line, the greater part of which remained uncompleted at the time of the approval of the act, or to engage in any work of railroad construction; "and as much of said act as authorizes the President of the United States to extend and complete any railroad is hereby repealed."

The act was not to be employed as a means of creating a system of government railways. The policy pursued was in conformity with these principles. On February 11, 1862, Brigadier General McCallum was appointed "military director and superintendent of railroads in the United States" with authority to "enter upon, take possession of, hold and use all railroads, engines, cars, locomotives, equipments, appendages, and appurtenances that may be required." Such portions of railways as were actually required were taken over, reconstructed, and operated under General McCallum's direction. An efficient organization was perfected and the work apportioned between a transportation section and a construction corps. Differences in gauge were eliminated, new bridges erected, additional lines laid down, track transferred from one point to another, machine and car shops were built, equipment constructed and commandeered. But the line or portion of line taken over was, in each instance, restored to its owners as soon as the military exigency had passed. And at the conclusion of the war all the lines which had been taken possession of in this manner were formally restored by Executive Order dated August 8, 1865. At the close of the war the government found itself in possession of rolling stock and other property valued at \$7,500,000. This it divided among southern roads, taking their bonds in payment. Failure by some of the roads to pay the interest on their bonds led to litigation and legislation, and the controversy dragged on for a decade before the

cases were finally settled. The total mileage taken over during the entire course of the war was only 2,105 miles, all confined to the states of Virginia, Mississippi and North Carolina. The greater proportion of the railway service enjoyed by the government was performed by the railways independently and the service paid for at rates agreed upon between the railways and the Secretary of War.

In the Confederate States no adequate control over railways seems to have been exercised, and the relation of that government to the roads was confined to agreements as to rates for the transportation of troops and supplies.

While the Civil War was still raging and, in spite of the interpretation placed upon the land grant sections in railway charters at the beginning of the conflict by the Secretary of War, attempts were made in Congress to exact free transportation from the railways. But all attempts failed, the general sentiment being that most of the roads would be bankrupted by the enforcement of such a policy. Until 1874, the policy adopted by the Secretary of War was continued unchanged. In that year Congress passed an act which declared that no part of the army appropriation should be paid "to any railroad company for the transportation of any property or troops of the United States over any railroad which . . . was constructed by the aid of a grant of public land, on the condition that such railroad should be 'a public highway for the use of the government of the United States, free from toll or other charge,' or upon any other conditions for the use of such road for such transportation." But the act gave the roads the right of appeal to the Court of Claims for the collection of any payments held to be due them. This invitation was accepted and the Court of Claims, having ruled adversely upon the demands of the roads, appeal was taken to the Supreme Court. The decision rendered in 1876 was favorable to the railways. This decision¹ went back for its basic principles to the canal grants where distinction was clearly made between a toll for the

¹ Atchison, Topeka and Santa Fe R. R. Co. vs. U. S., and Lake Superior and Mississippi R. R. Co. vs. U. S., 93 U. S., 442.

use of the highway and a charge for carriage. It held that Congress had this distinction in mind when it passed the land grant sections and "that the reservation in question secures to the government only a free use of the railroads concerned and that it does not entitle the government to have troops or property transported by the companies over their respective roads free of charge for transporting the same." It is doubtful whether the court, whose decision was by a bare majority, correctly interpreted the intent of Congress. It is more than probable that Congress meant what it said when it enacted the words "free from toll or other charge" upon the transportation of government property, and that but for the administrative interpretation placed upon it at the beginning, the railways might now be handling the enormous government business without compensation.

In a few grants, Congress made its will known beyond peradventure by adding to the usual free-from-toll clause, a provision in substantially the following form:

And the same (property or troops) shall at all times be transported at the cost, charge, and expense in all respects of the company or corporation or their successors or assigns, having or receiving the benefits of the land grants herein made.¹

In these latter cases it is clear that government business is to be performed gratuitously.

To meet the terms of the Supreme Court decision, a provision was inserted in the Army Appropriation Bill, passed in 1881, appropriating \$125,000 "for the payment of army transportation lawfully due such land grant railroads as have not received aid in government bonds, to be adjusted by the proper accounting officers in accordance with the decisions of the Supreme Court in cases decided under such land grant acts, but in no case shall more than fifty per cent of the full amount of the service be paid

¹ From a land grant to the Chicago, Milwaukee and St. Paul Ry., July 4, 1866.

until a final judicial decision shall be had in respect of each case in dispute," such payment to be accepted as in full of all demands. The following year this clause was reenacted with the provision that the fifty per cent compensation was to be computed upon the basis of tariffs for like transportation performed for the public at large. In 1891 a clause was added, providing that the government should pay at such rate as the Secretary of War should consider just and reasonable, but not to exceed 60 per cent of the compensation charged to private parties for like transportation. This figure of 60 per cent was changed to 50 per cent the following year, and has since been reenacted in each annual army appropriation bill without modification.

The rates prescribed by the Secretary of War are the maxima allowed under this provision: that is, fifty per cent of tariff rates for roads receiving land grants under the terms of the free-from-toll clause. In the case of the one bond aided road whose financial relations with the government are still unsettled—a portion of the Missouri Pacific—the government, in compliance with statute, withholds all payments for transportation and applies them on the interest upon United States bonds issued to the company.¹

In order to participate in government traffic, a large proportion of the carriers have agreed to charge on competitive business only the rates that land grant roads are permitted to charge. These carriers are known as "equalization lines." Some roads decline to offer land grant rates and some roads except certain kinds of traffic that is unremunerative.

The Spanish War provided a valuable lesson to the government as to the results that inevitably follow from a decentralization of authority in transportation matters, and a total lack of cooperation with the railroad authorities. So far as the transportation of troops was concerned, the movement seems to have been accomplished with despatch and without interference with ordinary traffic movement. The report of the quartermaster general for 1898 refers almost with enthusiasm to the success

¹ Section 5260, Rev. Stat.

of this undertaking. Between April and September, the railways moved 17,863 officers and 435,569 men—a relatively small movement when compared with our recent experience. But the organization broke down when it attempted to provision and supply the camps. As an illustration, supplies for 70,000 men were ordered to Tampa. In their effort to deliver these cars promptly, the railways created a congestion so serious that whole lines were blocked as far north as Columbia, S. C. Freight cars were not labeled; no one knew what any car contained, or where any specific supplies were to be found. Railroad officers had been called upon to perform service without any preliminary notice, and were put under the authority of local and minor military commanders who were concerned only with the problems of their own territories. There was no comprehensive plan, no concentration of authority in the office of the quartermaster general. Had the conflict been serious and prolonged, this utter breakdown in the quartermaster service would have been a significant factor in the final outcome. Troops and supplies were transported by the railways under contracts which in general provided for payment on the land grant basis.

Evidently the experiences of the Spanish War had sunk deep into the minds of army officials. The lesson of the futility of decentralization in the handling of transportation problems had been learned, and when Mexican troubles loomed up on our southern horizon, steps were early taken to avoid the danger of any repetition of the ineptitudes of 1898.

As early as October of 1915, the quartermaster general addressed a letter to the Secretary of War recommending that he communicate with the American Railway Association—a national organization in which railways are as a rule represented by their operating executives—suggesting the establishment within that association of a committee on military transportation with which the Department could cooperate in the transportation of troops and supplies. In conformity with this suggestion, a Special Committee on Cooperation with the Military Authorities was appointed, consisting of Fairfax Harrison,

President of the Southern Railway, Chairman; R. H. Aishton, President of the Chicago and Northwestern Railway, A. W. Thompson, Vice President of the Baltimore and Ohio Railroad, and W. G. Besler, President of the Central Railroad of New Jersey. Conferences were held between this committee and the quartermaster general's office and a general plan of cooperation was outlined which could be made operative at any time of public emergency.

When the call for the mobilization of state militia was issued in June, 1916, the plan earlier prepared was put into effect. A railroad official was placed in the office of the quartermaster general, at each department headquarters and at every mobilization camp, to assist in any way possible in the assembling of equipment and its loading and unloading. The Pullman Company established an office in Washington to direct the distribution of tourist sleepers in cooperation with the quartermaster's office. A meeting was immediately held in Washington at which the railway executives pledged themselves to make available all their equipment, motive power and personnel, and placed the execution of plans in the hands of their special committee. This committee, in contrast to the Railroads' War Board later created, concerned itself only with the transportation of troops and military supplies, and except in matters directly affecting train operation, acted only on instructions from the War Department.

As early as 1912, the quartermaster general had drawn up a plan with the Master Car Builders' Association for placing placards on carload shipments of government property in time of war or threatened war which should give priority to government freight. This plan, now made effective, expedited the movement of freight and eliminated the congestion which broke down the transportation machine in 1898. Cars so placarded were given right of way from origin to destination; they were never sidetracked except to be placed in through trains; they were shifted and unloaded without awaiting the formality of the surrender of bills of lading. The call upon the railroads for transportation came at a time when commercial passenger traf-

fic was at its height—in the fortnight including the Fourth of July. Yet, because of careful preliminary planning and a concentration of authority in Washington, the movement was effected without congestion or delay and without inconvenience to the traveling public. From the beginning of the movement up to July 31, 1916, there were transported to the border 111,919 men with impedimenta, materials and supplies. The distance traveled varied from 608 miles for the Louisiana troops to 2,916 miles for the Connecticut troops. Says the quartermaster general:

Considering the great distance traveled by the militia from the various camps to the Mexican border, the fact that there was but a single accident, and that of minor character, the celerity with which the trains were moved, and the entire absence of congestion or delay, it is believed that there has been no case in history where troops have been as well and safely transported or as well cared for while en route as in the recent mobilization.

The Secretary of War, in his annual report, makes the following comment:

The disturbed condition on the Mexican border in consequence of the Columbus raid gave us an actual experiment in the use of our railroads, the readiness with which their facilities could be organized in the service of the government, and a most instructive and helpful demonstration of the hearty cooperation which the government can expect from those who manage these great transportation enterprises.

Out of the experience derived from this troop movement grew the effective organization which welded the railroads of the nation into one operating unit.

CHAPTER III

War Organization of the Railways

In the Army Appropriation Act of August 29, 1916, was contained a provision to establish a Council of National Defense "for the coordination of industries and resources for the national security and welfare." This act directed the Council of National Defense, which consisted of six cabinet officers, to nominate, and the President to appoint "an Advisory Commission consisting of not more than seven persons, each of whom shall have special knowledge of some industry, public utility, or the development of some natural resource, or be otherwise specially qualified" for the performance of duties assigned by the commission. The duties of the Council, which were specifically mentioned in the act, were numerous and of large significance in the great campaign of preparedness upon which the country was entering. The first of these prescribed duties was "the location of railroads with reference to the frontier of the United States so as to render possible expeditious concentration of troops and supplies to points of defense; the coordination of military, industrial and commercial purposes in the location of extensive highways and branch lines of railroad; the utilization of waterways." As the transportation expert who should be responsible for the development and use of railway facilities, the President appointed Daniel Willard, President of the Baltimore and Ohio Railroad, and he was made chairman of the Committee on Transportation and Communication, and later chairman of the Advisory Commission.

Upon the initiative of Mr. Willard, the executive committee of the American Railway Association met on February 16, 1917, and elaborated plans for the more complete cooperation of railways in the scheme of national defense. These plans were embodied in the following resolutions:

WHEREAS, The President of the United States has appointed a Council of National Defense for the purpose of ascertaining the resources of the country and of securing the cooperation of all organized transportation and industrial activities in furtherance of this purpose.

RESOLVED, That, in order that the railways may be in a position to assist with their full strength the Council of National Defense, fourteen members be added to the Special Committee on Cooperation with the Military Authorities, including Mr. Fairfax Harrison, as general chairman, so as to constitute a committee of eighteen members, to represent the railways in connection with the work which the Council of National Defense has in hand; the membership of the committee to be representative of the four (4) army departments into which the country is divided.

RESOLVED, That the name of the Special Committee on Cooperation with the Military Authorities be changed to Special Committee on National Defense, of the American Railway Association.

The committee appointed under this resolution consisted of Fairfax Harrison, President of the Southern Railway as chairman, and seventeen others—six in the Eastern Department, five in the Central Department, and three each in the Southern and Western Departments. On the same day the President of the American Railway Association, Mr. W. W. Atterbury, Vice President of the Pennsylvania Railroad, sent a telegram to the president of every railroad in the country, describing the action taken and requesting the hearty cooperation of each railway in the work of the Council of National Defense. The Special Committee on National Defense was called into conference on March 1 with the Secretary of War and other officials of the War Department, where definite plans were drawn up for organization looking toward greater cooperation.

It thus becomes clear that the groundwork for railway unity in the public interest had been laid previous to our entrance into the war, and that much had been done in the way of preparedness which was of material assistance toward speedy and effective accomplishment when the country had actually embarked upon the conflict.

Declaration of a state of war between the United States and Germany was formally made by Congress on April 6, 1917. The preceding day, April 5, Chairman Harrison gave out a statement in which he announced that the railways acting through their official organization, the American Railway Association, which had in turn delegated the power to the Special Committee on National Defense, had arranged to put at the service of the government and to give it the preferential use of all facilities which might be needed, and plans had been completed between the railway committee and the quartermaster's department for making the most effective use of facilities in case of war. He called attention to the fact that in contrast with the procedure in England where the government assumed responsibility for the operation of the railroads and guaranteed net earnings, here the government would confine itself to advising the roads as to the service required and the responsibility would be upon the railroads, operating as one unified system, to provide that service. The chairman expressed the belief that this plan of holding railways responsible for results would work for efficiency, and that the railways would be able to meet government requirements with preferential treatment, and at the same time handle commercial business without substantial delay. While he asserted that the railroads were keenly appreciative of this opportunity to demonstrate to the country the value in time of war of "railroads with elastic management," a careful reading of this pronouncement reveals clearly that it was intended as a warning and not as a mere statement of policy. The railways were on trial. Upon the success of their cooperation depended the preservation of the principle of "elastic management."

But the Council of National Defense was apparently intent upon a more thoroughgoing railway cooperation. Mr. Harrison's statement had to do only with the handling of government property, whereas the Council was interested in all the vast problems of industry that lay back of the mere movement of government troops and supplies. Moreover, it seems probable that the Council was not altogether sure that the Special Com-

mittee on National Defense could speak with entire confidence for the railways as a whole and that some more definite pledge of support was necessary if the railways were to remain independent in their operation. The Council embodied its desires in a resolution as follows:

RESOLVED, That Commissioner Willard be requested to call upon the railroads to so organize their business as to lead to the greatest expedition in the movement of freight.

Commissioner Willard immediately called the railway executives to Washington by telegram, and on April 11 there took place the most significant assemblage of railway men that has ever occurred in our history. Every railway represented gave up its initiative and its independence for the period of the war and united with the rest in the creation of a single unified railway system for the entire country under the sole direction of a committee in Washington. Nearly seven hundred railway executives placed their signatures upon the following extraordinary resolution:

RESOLVED, That the railroads of the United States, acting through their chief executive officers here and now assembled, and stirred by a high sense of their opportunity to be of the greatest service to their country in the present national crisis, do hereby pledge themselves, with the government of the United States, with the governments of the several states, and with one another, that during the present war they will coordinate their operations in a continental railway system, merging during such period all their merely individual and competitive activities in the effort to produce a maximum of national transportation efficiency. To this end they hereby agree to create an organization which shall have general authority to formulate in detail and from time to time a policy of operation of all or any of the railways, which policy, when and as announced by such temporary organization, shall be accepted and earnestly made effective by the several managements of the individual railroad companies here represented.

It was a dramatic moment in the history of railway management and control, enacting a policy which will have far reaching consequences after the war has ceased.

For the execution of this plan, the Special Committee on National Defense was enlarged to thirty-three members and divided into six departments corresponding to the departments of the army.¹ An executive committee of five, selected from this special committee and known as the Railroads' War Board, established headquarters in Washington. It consisted of Fairfax Harrison, President of the Southern Railway, Chairman; Samuel Rea, President of the Pennsylvania Railroad, Howard Elliott, Chairman of Committee on Intercompany Relations, New York, New Haven and Hartford Railroad Company and Chairman of Executive Committee, Northern Pacific Railway, Julius Kruttschnitt, Chairman of the Southern Pacific Company, and Hale Holden, President of the Chicago, Burlington and Quincy Railroad. Mr. Willard, as ex officio member of the executive committee, furnished the connection with the Council of National Defense, and Edward E. Clark performed the same function in behalf of the Interstate Commerce Commission. Directly reporting to this War Board were seven subcommittees under whose direction the various policies of the Board have been given expression: namely, The Commission on Car Service, and subcommittees on Military Transportation Accounting, Military Equipment Standards, Materials and Supplies, Military Passenger Tariffs, Military Freight Tariffs, and Express Transportation.

The Commission on Car Service has been so conspicuous in the work of the railways that its development requires treatment in some detail. It was originally a standing committee of the American Railway Association, and on December 5, 1916, was reconstituted and established in Washington as a successor to the Committee on Car Efficiency which had been acting in co-

¹ In March, 1917, the Secretary of War subdivided the Eastern Department into three separate sections, thus increasing the number of departments from four to six.

operation with the Interstate Commerce Commission in an endeavor to relieve car shortage and congestion. Since the outbreak of the European War, the purchases of belligerents in this country had created a demand for transportation that our facilities proved inadequate to meet. The uncertainties of ocean transportation added to the difficulties of regular and speedy movement, and this led to serious congestion at the ports and on lines leading thereto. At the suggestion of the Interstate Commerce Commission and with its cooperation, an effort toward greater unity of action was organized but the situation grew worse rather than better. The establishment of the Car Service Commission was a part of the attempt to improve the situation. Working in cooperation with the Interstate Commerce Commission, this body had received weekly reports from all parts of the country, distributed box cars, ordered the return to owners of open top cars for coal and ore, relieved the difficulties in respect to refrigerator equipment, and imposed embargoes when found necessary. This was without much regard to the code of car service rules adopted by the American Railway Association in November, 1916. The situation was out of hand, and drastic emergency orders took the place of rules.

Meanwhile, the Interstate Commerce Commission had been making an investigation. Its report on car supply was issued in January, 1917, and the Commission, by a vote of four to three, prescribed a partial code of car service rules by an exercise of authority which was at least doubtful under the statute—a doubt which the Commission voiced in a request to Congress for the grant of this specific power. This stirred the railways to action. The Commission on Car Service was reorganized, and given full powers until May 1 to deal with the situation by an agreement signed by the roads, under which they undertook to obey the new code of car service rules then adopted. By this agreement they also conferred authority upon the Car Service Commission to make such necessary modifications in the rules as exigencies might require. The Interstate Commerce Commission thereupon postponed the effective date of its order

and cooperated through a representative with the Car Service Commission of the railways in the attempt to make the regulations of the railways effective. At the meeting on April 11, at which the railway executives completed their national organization for war purposes, the Commission on Car Service was made a subcommittee of the Special Committee on National Defense.

However, Congress, viewing with concern the traffic congestion of 1916 and the possibility of still more serious confusion arising from our entrance into the war, was unwilling to leave the solution of the problem of car supply wholly in the hands of the railways. To be sure, the Interstate Commerce Commission was cooperating and its counsel was being heeded, but the Commission had no specific statutory power to take the situation vigorously in hand. Accordingly, on May 29, 1917, Congress, acting upon the recommendation of the Commission, passed the Esch bill amending the Act to Regulate Commerce. This gave the Interstate Commerce Commission power after hearing either on complaint or on its own initiative, to establish car service rules concerning the movement, distribution, exchange, interchange, and return of cars, including the classification of cars, payment for use of cars of other railways, and penalties for non-observance of the rules. Whenever in its judgment an exigency exists, the Commission may at once, without formal notice or answer by the carriers, suspend the operation of existing rules and substitute others. The Commission may also require the carriers to file their rules and regulations concerning car service as a part of their tariffs. The act is permissive and not compulsory and thus far the Commission has not seen fit to exercise its authority. The railways were apparently to be given the initiative during good behavior. The Interstate Commerce Commission has organized a Bureau of Car Service by appointing representatives who sit with the railways' Commission on Car Service, and all regulations adopted by the railways must presumably be approved by these representatives. Otherwise, they can promptly withdraw to their own office and put the machinery of the new act into operation. The position that the

Interstate Commerce Commission proposed to take in the exercise of its new powers was thus expressed by Commissioner Clark in July:

That law (the Esch bill) comes into existence at a time when the railroads themselves are in my judgment dealing with this situation in a comprehensive, patriotic, able and fair manner.

It would be most unfortunate if because that law has cast upon the Commission the powers and duties which it does cast upon us, the railroads' officers should feel discouraged in their efforts, and I can say authoritatively that it is not the desire of the Commission that they should so feel, because in so far as our duties reach we hope to work the problems out in cordial cooperation with this Committee. We do not want to interfere with any well laid, well conceived plan that this Committee has formed. We are organized to perform those duties with those purposes definitely in mind. We wish to establish the best possible means of contact with the Car Service Commission and to have thorough understandings with them. We will have no secrets from them and will consult freely with them on important matters.

It is not perhaps entirely unfortunate that this law was passed, because in any large movement for progress or reform we run against the recalcitrant that will not willingly get into line. So if it becomes necessary in dealing with recalcitrants or insurgents the Commission will have the power to require proper action and will not hesitate so to act.

So important has been the work of this railway committee on car service and so significant the results of its efforts, that the subject will be given separate consideration in the chapter on Efficiency.

The activities of the remaining committees reporting to the War Board may be summarized briefly. The subcommittee on Military Transportation Accounting consists of seven chief accounting officers with headquarters in Washington. Its functions have been of two kinds: first, to expedite movement of both

government and commercial freight by the introduction of more efficient accounting methods, and second, to assist army quartermasters in the accounting details incident to the transportation of troops and military supplies.

The complete organization subordinate to the Military Transportation Accounting subcommittee consists of (a) seven general accounting agents who keep in touch with the seven departmental commandants and with the adjutant generals of the states comprising the districts to which they are assigned, report their accounting needs to the accounting officers in each state, and correct or adjust such accounting irregularities as may be within their power; (b) forty-one state accounting officers, whose duty it is to keep in touch with governmental officers in their respective states (some officers representing more than one state), to supervise the field representatives, and act upon conditions reported by them. They represent all railways in the states to which they are appointed and report to the chairman of the subcommittee in Washington. (c) Approximately one hundred and two accountants or field representatives who are located at the camps. They are appointed by the state accounting officers to whom they report weekly. The chairman of the subcommittee in Washington receives these weekly reports, keeps in touch with departmental officers of the government, and adjusts such irregularities as may require attention. He makes weekly and special reports to the War Board.

To the subcommittee on Military Equipment Standards, consisting of representatives of the mechanical, car building, and purchasing departments, was assigned the task of preparing designs for fitting up existing equipment for military uses and designing new equipment as required.

The subcommittee on Materials and Supplies has as its function the determination of the need by the railways for materials and the methods of satisfying that need.

The subcommittee on Military Passenger Tariffs was created for the purpose of working out routes and base rates for the handling of troops, and the subcommittee on Military Freight Tariffs

has had a similar function in connection with the handling of government material, particularly impedimenta accompanying the troops.

It was found desirable in June to create an additional sub-committee on Express Transportation consisting of the vice presidents of the different express companies, for the purpose of coordinating the work of these companies with the general problem confronting the railways of the country.

Finally, late in November a committee of seven operating executives of eastern railways was created to take radical steps in the direction of a pooling of facilities in an effort to solve the problem of congestion which in spite of all measures taken to prevent it had grown steadily more serious.

CHAPTER IV

The Drive for Operating Efficiency

It was evident at the beginning that there would be a demand for railway equipment far beyond the ability of the railways to supply it if all the customary trade agreements between shippers and carriers, and the established interchange rules between carriers themselves, were allowed to prevail as in normal peace times. Under the deterrent influence of high prices, the inability of the car builders to get material, and the demand for equipment abroad, the supply of new equipment has been very small. In face of this shortage there was the extraordinary demand for rolling stock that began with the export of supplies to the Allies, which was greatly enhanced when, upon our entrance into the war, the movement of supplies for the construction of army camps began, together with the speeding up of all industries directly and indirectly connected with the war. The railways were on trial and they realized fully that a breakdown at this time might mean a change in governmental policy so radical and so far reaching that a return to the pre-war system would be unlikely. Faced with this situation, the Railroads' War Board, through its Commission on Car Service, undertook with extraordinary vigor a campaign of education and organization throughout the entire country, to effect such a degree of cooperation between shippers and carriers as would eliminate wastes and conserve motive power, car capacity, and fuel.

General policies of national scope were quickly promulgated. A general order concerning interchange of various classes of cars, and instructions concerning routing which suspended existing practice, disregarded ownership, and looked toward more efficient movement, were put into effect. Orders for the mobilization of open top equipment in the service of ore and coal carrying were issued, and the use of this equipment for other

kinds of traffic narrowly restricted. Orders were issued requiring that the movement of ore and coal be given special and continuous preferential service until further notice. Rules were adopted governing the prompt return to the home road of hopper and gondola cars used in this kind of traffic, and the Board announced its intention of enforcing this order by disciplinary measures which should include, when deemed necessary, the publication of names of officers and railroads refusing or failing to respond to this appeal—a threat that was later several times put into execution.

These new orders, compelled by our entrance into the war, canceled existing car service rules under which the Car Service Commission had been attempting for some time to solve the problem of car supply.

To facilitate the prompt movement of coal to the northwest, a plan was effected on June 1 for pooling all coal at Lake Erie ports regardless of ownership, thus increasing the rapidity of loading and movement of lake vessels. A saving of one and one-half days in the time of each coal car was thus accomplished. For the return journey lake ore shipments were similarly pooled and it has been estimated that in these two movements there would be a saving of 52,000 cars during the season of navigation. Similarly, in July an agreement was reached by shippers of tidewater bituminous coal to pool all their shipments at the ports of New York, Philadelphia, Baltimore, and Hampton Roads. This plan reduced the number of kinds of coal from 1,156 to 41 and there was no longer any holding of coal in freight cars until a shipper accumulated a full cargo of a particular grade. Delay to cars at ports was cut down and a very large part of the shifting of cars at terminals eliminated. It was estimated that 133,000 freight cars would be saved—permitting 6,640,000 more tons of coal to be hauled. Coal men have sacrificed well established trade names in the interest of this efficiency movement. The tangible results of this policy are that in the five months ending September, 1917, there were moved by the 128 railroads engaged in coal hauling, 4,951,188

cars of all kinds of coal, which was an increase of 20.9 per cent in the number of cars moved as compared with the same months of 1916.

But not only did the coal and iron ore tonnage receive attention. The box car equipment of the country was mobilized in one gigantic pool, car service rules that restricted movement according to ownership were suspended and cars were ordered sent with the greatest possible despatch in train loads of empties to sections where there was a dearth of equipment and an imperative demand for transportation service. Between May and October, 1917, the number of empty cars so moved was 156,850. Arrangements were perfected for weekly reports on the grain situation, showing grain at interior points in elevators and cars, and amounts shipped both for export and domestic use, grain in ports for export, and shipments by boat to Allied and other countries. This close inspection resulted in reducing the actual number of cars required in the face of an abnormal export of 76,000,000 bushels of grain from May to July. A close watch was kept on accumulations of cars, and embargoes were urged and authorized whenever congestion was threatened at any important point. Moreover, the embargo was promptly employed as a penalty against shippers who ordered more cars than they could load, or against consignees at ocean ports who ordered shipments without contracting in advance for vessel space.

To conserve the fuel supply, to economize man power and motive power, the Railroads' War Board in May issued suggestions to the railways with reference to economy in train service. In brief, these suggestions included consolidation of through passenger service and the elimination of trains that were not well patronized; the reduction of special trains, and the abandonment of excursions; on branch lines, the reduction of train service, and the substitution of mixed service for separate freight and passenger service; the reduction of length of passenger trains which had previously been double headed for speed; and the elimination or restriction of special equipment such as observation, club and parlor cars. These suggestions were promptly

adopted by large numbers of roads throughout the country. In many cases where such curtailment did not mean economy, it has nevertheless been effected in order to encourage the movement of foodstuffs and to clear the lines for the prompt handling of government supplies and troops. The War Board has estimated that in the five months, May to September, there was a reduction of twenty-five million train-miles annually in passenger service. In the fifteen states of the Central Department it is estimated that the total saving from passenger train reductions up to October, 1917, amounted to 1,086,000 tons of coal per annum, 203,000 barrels of oil, 350 locomotives and 1774 men. In a majority of instances the economy has been accomplished with the hearty approval of the public which has accepted the attendant inconvenience as a war necessity and has sacrificed its personal interests for the larger good. There have been a few cases of opposition on the part of state regulating bodies, but they have been the exception. One illustration will suffice to show how hampering a state commission can be when it sets its own dignity above the public interest. The Texas and Pacific in order to conserve coal supply and insure the regular movement of sugar traffic, eliminated nine branch line passenger trains. The Railroad Commission of Louisiana on November 22 imposed a fine of \$5,000 for an "arbitrary, wilful, deliberate and flagrant" violation of the rule of the commission which forbids the discontinuance of a passenger train without the consent of the commission. It was further ordered that the fine should be increased by \$5,000 for every day that the violation of the rule continued. Fortunately the federal court came to the rescue with a temporary injunction.

The Commission on Car Service, with headquarters in Washington, has organized thirty-three local committees in important commercial centers throughout the country, each of which reports weekly to Washington. These committees in turn have subcommittees to the number of fifty-two located in the smaller cities contiguous to the large centers. The local committees have been given large measure of discretion in their form of organiza-

tion and their methods of work; but they furnish a medium for the dissemination and adoption of policies decided upon by the central committee for the country as a whole. It is their duty to anticipate trouble, to localize complaints, to bring quicker and more effective action. Personal solicitation, correspondence with shippers, and newspaper campaigns, have all been employed. They have striven with large measure of success for cooperation with large shippers and with shippers and commercial organizations of all kinds, and with the state railway and public service commissions. Weekly meetings have been held to which representatives of the shippers and the state regulating bodies have been invited. Most of the invitations have been accepted and the accomplishments of these committees in the few months of their activity have been due in large part to the spirit of cooperation displayed by carriers, shippers, and regulating bodies. To those who are looking beyond this war to the normal activities of a time of renewed peace, this growing spirit of cooperation is most significant. If it can be preserved and a structure erected upon it which will make use of the experience gained in this time of stress, we shall have gone far to eliminate many of the problems involved in railway regulation.¹

The results accomplished by the central Commission on Car Service and its local subcommittees, if explained in detail, would carry us into the technicalities of commercial procedure to an extent unsuited to this discussion. An enumeration of the objects sought and the results accomplished will suffice. Technical proposals for the promotion of efficiency have either originated with the Car Service Commission in Washington, or have been adopted and promulgated by them after suggestion from one or more of the local committees. Inspectors have been employed to stimulate the adoption of the plans suggested, to watch for violations of the new regulations, to study the working of the

¹This principle of cooperation is recognized by the Interstate Commerce Commission which, in its order of October 20, 1917 (Fifteenth Section Order No. 1), concerning the recent amendment to the law requiring an advance approval of all tariffs filed, urges consultation and cooperation between carrier and shipper before new tariffs are offered for filing.

new suggestions. In some sections, solicitors of freight have abandoned their competitive activities and are devoting their entire time to the work of the car service committees.

The center of the whole movement has been the drive for a more intensive car loading. Each commodity as it has moved in quantity, as, for example, vegetables from the southeast, coal, lumber, has been subjected to study and the relation of car capacity to average load ascertained.

It is a well known fact that the average load of a freight car is far below its average carrying capacity. The following table from official figures of the Interstate Commerce Commission reveals the relationship since 1904:

	Average capacity (tons)	Average load per loaded car (tons)	Per cent capacity utilized
1904	30.1	17.7	59.9
1905	30.8	18.1	58.7
1906	32.2	18.9	58.7
1907	33.8	19.7	58.4
1908	34.9	19.6	56.2
1909	35.3	19.3	54.7
1910	35.9	19.8	55.2
1911	36.9	19.7	53.3
1912	37.5	20.2	53.9
1913	38.3	21.1	55.1
1914	39.1	21.1	53.9
1915	39.7	21.2	53.4
1916	40.4	22.4	55.4

There should not however be too hasty criticism of the railways for the waste clearly revealed in this table. Whether or not a car can be loaded to 100 per cent capacity depends upon many considerations other than the actual capacity of equipment, such as the nature of the commodity to be loaded, the supply of the commodity available for shipment at any particular time,

and the commercial conditions under which the various commodities are marketed, which in turn govern the units of shipment. Under conditions of keen strife for business shippers can bring pressure to bear upon carriers to furnish more cars than from the standpoint of capacity are actually required, and can keep down the minimum weight required for a carload. It is a well recognized fact that minima have not increased at all proportionately with the increase in carrying capacity of equipment. In many cases the minimum has been the selling unit of the commodity. In other words, it has been fixed by the shipper. It was this situation that the Car Service Commission faced when it undertook its campaign for better car loading.

A campaign was started for a load not only to the marked capacity of the car, but for one 10 per cent in excess of capacity—the maximum load which the cars are constructed to sustain. This agitation ran up against trade practices under which shippers were employing units that had long been standard, and upon which the minimum carload provisions of the railways were based. These were, many of them, survivals from the period when cars of less capacity prevailed. Yet all over the country business men, at the urgent solicitation of the railways, have abandoned their units and have ordered and shipped in full carloads, merely indicating whether they wanted a large or small car. When this has proved impracticable, the railways have been putting in double minimum weight carloads, and even triple carloads, in a single car. Clubbing together of buyers and the concentration of shipments for a single destination have been urged and railways have been instructed to consolidate underloaded merchandise cars at transfer points. One of the most interesting experiments is the policy announced by some roads of accepting less carload freight on specific days only—"sailing days" as they are called—for specific destinations, thus consolidating shipments and ensuring heavier loading. Pressure is being brought to eliminate "trap-car service" under which less carload freight is collected and distributed at warehouses on private tracks. Advocacy of the raising of minimum weights has

come from some sections—even from shippers' organizations—but this involves approval of the Interstate Commerce Commission and the movement has not thus far gained much headway.

Not only is there a growing cooperation between shipper and carrier, but likewise, through the medium of these local committees, a rigid insistence upon cooperation between carriers themselves where such cooperation is essential to efficiency. A large manufacturing plant that formerly, because of railway competition, had an abundance of cars which it loaded lightly, is now provided with only enough cars to meet its need under maximum load and the traffic is divided among the lines. In October an agreement was reached among carriers at Pittsburgh to apportion iron ore among consignees for the remainder of the navigation season in order to prevent excessive accumulation at some plants and shortages at others, and to apportion car supply equitably. War exigencies have converted the agreement in restraint of trade from a misdemeanor punishable by fine and imprisonment into a highly virtuous and respectable business practice.

The results of the intensive loading campaign will be set forth completely in a tabulation later, but it is of interest to notice that the increase in size of trade units has made appreciable headway under the patriotic stimulus. Cotton which formerly moved in units of 50 bales now moves in units of 65 and 75 bales, which means a saving of from 83,000 to 125,000 small cars. Sugar which formerly moved on a minimum of 24,000 pounds now moves only on a minimum of 60,000 pounds. Reports made to the Car Service Commission in September show that cars from Florida and Georgia now carry 200 barrels of potatoes each as compared with 125 barrels a year ago; that cement cars are carrying 77,000 pounds as against 70,000 pounds last year; that the average carload of flour from Minnesota last year was about 46,000 pounds, this year it is 62,000 pounds. A check of coal cars on one of the coal carrying railways showed them loaded on the average to 111 per cent of capacity. Examples could be multiplied in which manufacturers and producers of raw materials

have either changed their units or, realizing the value of intensive loading, are now filling the cars to capacity.

But the campaign has included not only an attack on waste capacity but likewise on waste time. The railway's business is not tons, but ton-miles. Freight cars are *vehicles*, not *warehouses*, and the lack of track room has often been as serious as the lack of cars. The time spent in loading and unloading is to the railway, and should be to the shipper, just so much waste, to be avoided as completely as possible. To conserve time, numerous reforms have been urged and are being put into effect as fast as conditions or the conservative attitude of the particular community has permitted. On the part of the shippers, this has involved the limiting of orders for cars to the number that can be promptly loaded, the prompt furnishing of billing for the shipment, and of switching and reconsignment orders; the prompt surrender of bills of lading on cars to "shipper's order," and speedy unloading without regard to the usual allowance of free time. On the part of the carriers, there has been a speeding up in the placement of cars for loading and unloading and a shortening of the time consumed in transit and terminal delays; a careful watching to prevent the increase in cars needing repair and the introduction of methods that will hasten repairs when the damage is slight. There has been also a reduction of "time in shop," a strong agitation for the abolition of the "average agreement" under which consignees are able to shift their demurrage accumulations from one consignment to another; and there is demand in some sections for an increase in demurrage rates. One of the most important steps in the direction of speeding up traffic is the general order issued by the Car Service Commission effective October 1, requiring that all carload interline shipments shall be accompanied by the revenue way-bill. This is for the purpose of avoiding the delay at railway interchange points and at destination awaiting the arrival by mail of the way-bills covering freight. Following the same line of procedure, provision has been made to expedite merchandise and package cars. The closing of freight stations to the public in the afternoon a half

hour or an hour earlier has been put into effect to a very large extent, making possible the loading of all outbound business that day and preventing congestion. In only a few instances has this practice been seriously opposed by shippers.

In fact, the success of the entire movement would have been impossible without the aid of the shippers in both their organized and individual capacity. A conference of the National Council of American Cotton Manufacturers was held in October at which there were represented the growers, ginner, compress companies and carriers. The problem of greater density of compression was thoroughly discussed and means devised for balancing movement by water and rail to prevent congestion. Officers of the National Industrial Traffic League and the Railway Business Association are very active in addressing their members in the interest of more efficient use of railway equipment and the quartermaster's department has issued orders that all government freight is to be loaded to 110 per cent of the capacity of the car.

The results of the efforts of carriers and shippers to conduct the freight transportation of the country with increased efficiency may be summarized in the form of a table for the months of April to October, 1917, inclusive, covering the first seven months of the activities of the War Board.

FREIGHT OPERATIONS

Seven months ended October 31

(Roads with annual operating revenues above \$1,000,000)

Item	1917	1916	Per cent of increase
Freight train-miles	389,408,527	373,083,802	4.4
Freight locomotive-miles	463,154,105	441,988,432	4.8
Freight car-miles:			
Loaded	9,695,211,149	9,425,768,415	2.9
Empty	4,207,348,482	4,034,691,664	4.3
Total	13,902,559,631	13,460,460,079	3.3
Revenue ton-miles	241,356,017,626	214,381,757,775	12.6
Non-revenue ton-miles	21,088,597,295	19,127,221,723	10.3
Total—revenue and non-revenue	262,444,614,921	233,508,979,498	12.4
Average number of freight locomotives in service	31,449	31,036	1.3
Average number in shop or awaiting shop	4,364	4,743	d 8.0
Per cent in shop or awaiting shop	13.9	15.3	d 9.2
Average number of freight cars in service	2,346,591	2,289,866	2.5
Average number in shop or awaiting shop	136,767	144,884	d 5.6
Per cent in shop or awaiting shop	5.8	6.3	d 7.9
Tons per train	674	626	7.7
Tons per car	18.9	17.3	9.2
Tons per loaded car	27.1	24.8	9.3
Average miles per locomotive per day	68.8	66.5	3.5
Average miles per car per day	27.7	27.5	0.7
Average miles operated—single track	228,461	228,131	0.1

d = decrease.

When studied with care this table reveals a striking picture of operating efficiency. It will be noted in the first place that the increase in equipment available for use has been very small—only 1.3 per cent in freight locomotives and 2.5 per cent in cars, so that the results have been accomplished largely with the utiliza-

tion of existing equipment. New equipment has been practically unobtainable, partly through lack of funds with which to purchase, but mainly because more imperative use has been found for new equipment in France and Russia.

Efficiency is revealed in this table first in the increase in size of load and the more complete utilization of equipment, and second in the greater mileage made by cars. Freight train-miles have necessarily increased, but the increase of 4.4 per cent is small compared with the increase in revenue ton-miles, 12.6 per cent. The average number of tons per train has increased 7.7 per cent, the tons per car 9.2 per cent and per loaded car 9.3 per cent. At the same time the amount of equipment held for repairs has been reduced, the percentage of locomotives under or awaiting repair decreasing 9.2 per cent, and of freight cars 7.9 per cent. In the matter of daily mileage there has been an increase per locomotive of 3.5 per cent, of cars 0.7 per cent, and this in the face of the factor that would tend to retard speed, the factor of increased load per car and per train. In other words, the freight locomotive in 1917 was hauling nearly a twelfth more tons to the train, and covering more miles each day with the heavier train, than in 1916.

CHAPTER V

Cooperation of Government and Railways

It was not for lack of power that the government refrained from taking over the railways upon our entrance into the war, and operating them on public account. The power of the President to take possession of railroad lines conferred in the Act of 1862 expired by limitation upon the "suppression of this Rebellion," and renewed authority was necessary before any steps could be taken, unless the President chose to make this drastic move under his general war powers. Doubtless such exercise of authority would have been sustained by public opinion had the exigency been sufficient, but Congress did not leave the matter in this condition of uncertainty.

In the Army Appropriation Act passed in August, 1916, the following clause was inserted:

The President, in time of war, is empowered, through the Secretary of War, to take possession and assume control of any system or systems of transportation, or any part thereof, and to utilize the same, to the exclusion as far as may be necessary of all other traffic thereon, for the transfer or transportation of troops, war material and equipment, or for such other purposes connected with the emergency as may be needful or desirable.

This placed the discretion in the hands of the Chief Executive. Should the railways at any time fail to fulfil their functions as war agencies, the President is clothed with full authority to relieve their management of further responsibility and to undertake the task himself. For the first nine months of the war, he deemed it wise to leave railway operation in the hands of railway men, to exercise a close scrutiny of the success or failure of private management, and to cooperate in any way possible through depart-

ment heads and the various governmental organizations in securing efficient service.

The points of contact between government agencies and the railway organization are numerous and have been constantly growing. It is the purpose of this chapter to describe the more important of them.

As already stated, President Willard of the Baltimore and Ohio Railroad was made Chairman of the Committee on Transportation and Communication of the Advisory Commission of the Council of National Defense. Upon him at the beginning of our participation in the war poured complaints from every quarter, urging adjustment of local situations, involving car supply, embargo and a variety of difficulties. The organization, then new, was not familiar to the people and they wrote to whomever appeared to them as being most available and most likely to act—sometimes to the Council of National Defense, sometimes to the Interstate Commerce Commission, and even sometimes to the President of the United States. Most of these complaints eventually reached the Railroads' War Board either through the Council of National Defense, as represented by Mr. Willard, or through the Interstate Commerce Commission, as represented by Mr. Clark. Both of these men, while having no vote, sat as ex officio members of the War Board; they attended its meetings frequently at the beginning when questions of organization and relationship with the government were uppermost; they furnished the connecting link between the railways and the administration and they exercised a sufficient scrutiny so that they were prepared to advise the President if he should at any time have under consideration the use of the power to commandeer the roads. As time went on Mr. Willard concerned himself less with the detail of railway operation as represented by the War Board and more with the larger problems of transportation that involve shipment by water as well as rail, and that bring under consideration international as well as local problems. His retirement from the Board took place upon his acceptance of the chairmanship of the War Industries Board.

One of the most serious and fundamental problems of this war on its business side arose from the fact that consumption was outrunning production at such an alarming rate, that in economic terms demand was far in excess of supply. It became imperative, if we were not to reach a state of utter demoralization in prices, that the principle of priority should be rigidly applied in this country, as it had been in England, and the competing demands for the same product should be graded according to urgency. We are not directly concerned in this discussion with the manner in which the Administration has temporized with this problem; the futilities of a democracy are too voluminous for adequate treatment here. But we are concerned with the application of the principles of priority to railway transportation.

Among the amendments to the Interstate Commerce Act in 1906 was the following (Sec. 6) :

That in time of war or threatened war preference and precedence shall, upon demand of the President of the United States, be given over all other traffic, to the transportation of troops and material of war, and carriers shall adopt every means within their control to facilitate and expedite the military traffic.

To this, the Naval Appropriation Act of August, 1916, passed at a time of severe congestion in railway traffic, added the following amendment :

And in time of peace shipments consigned to agents of the United States for its use shall be delivered by the carriers as promptly as possible, and without regard to any embargo that may have been declared, and no such embargo shall apply to shipments so consigned.

But the powers here granted were not sufficient to meet the situation. The act of 1906 gave the President authority to demand precedence only with respect to strictly military traffic. The amendment of 1916, while it related to traffic other than

military, was only a demand for prompt movement and contained no power to demand priority of shipment.

It might be argued that the section in the Army Appropriation Act giving the President power to take possession of the roads contained all the authority needed, had the President chosen to exercise it, to handle effectively the food and fuel situation, for the President might assume control "for such other purposes connected with the emergency as may be needful or desirable." Yet the Administration had no desire to take possession of the railways unless its hand were forced by a breakdown of private management.

In view of the fact therefore that our important service in the war for the year 1917, at least, was to consist in an adequate output and an efficient distribution of food supplies and raw materials of manufacture, quite as much as a prompt handling of military traffic, some additional power in the hands of the Executive seemed urgently needed. Accordingly, on August 10, 1917, Congress passed the Priority Law, under which the President was authorized during the continuance of the war to direct that carriers, whether by rail, water or otherwise, shall give preference in transportation to such traffic as in his judgment is essential to the national defense. He may issue his orders direct or through such person as he may designate for the purpose, or through the Interstate Commerce Commission. The common carriers are authorized without responsibility or liability on the part of the United States, to maintain in Washington an agency empowered by such carriers as join in the arrangement, to receive service of such orders in behalf of all the carriers. Any failure on the part of a carrier to obey such orders subjects officers, agents, and employes to punishment for misdemeanor, either by fine of \$5,000 or imprisonment for one year, or both. For the transportation of property or persons under such orders, just and reasonable rates are to be prescribed by the Interstate Commerce Commission. In complying with orders, carriers are relieved from penalty for the violation of any existing law. This last provision has reference presumably to the prohibitions

of discrimination in the Interstate Commerce Act, and agreements and conspiracies under the Anti-trust Act. Yet it is conceivable that this will also exempt carriers at times from penalties for violations of such acts as the Sixteen Hour Law and the Safety Appliance Act, and that it may even override the exercise of police power in the several states where full crew and similar laws have been enacted. Such exemption could hardly have entered the Congressional mind when the law was passed.

Robert S. Lovett, Chairman of the Executive Committee of the Union Pacific Railroad, was appointed by the President August 18 as Director of Priority Shipments, and has since been made chairman of the so called Priority Board, which has broader functions than those relating to transportation merely. With Judge Lovett's approval, it was arranged that the Railroads' War Board should accept orders on behalf of all carriers. The railways individually signed an agreement authorizing the War Board to accept service, and pledging themselves to consider such orders as legal and binding upon them. It was the purpose of the Priority Director—and he has adhered to this policy since—to interfere with the independent operation of the railways only when an emergency required the exercise of his authority. Up to the middle of November he had issued but two orders under this law. The first followed immediately upon his appointment and was at the urgent request of the Railroads' War Board.

As has been described elsewhere, the War Board, by the promulgation of special car service rules, had succeeded in increasing materially the movement of coal. Moreover, it had organized a pool of coal at Lake Erie ports to ensure more rapid movement to lake ports in the northwest. But in spite of co-operative efforts on a large scale, there was a decrease in the amount of coal loaded into boats at Lake Erie ports as compared with the year before. Unless relief were immediately to be secured through heavier lake shipments, the northwest would face a critical situation for the winter, as the deficiency could

not be supplied by rail shipments direct. Iron ore traffic being the return load from the coal movement, is dependent directly upon the efficiency of that movement. The War Board confessed its inability to control this northwest movement to the extent necessary. Moreover, in the creation of a coal pool and the insistence that preference be accorded to coal traffic, the railways had not only been violating the anti-preference clause of the Interstate Commerce Act and the acts of various states, but they had probably invited the penalties of the Anti-trust Act. They felt the need of absolution for their justifiable sins.

On August 20, Judge Lovett issued his first priority order. He declared that sufficient bituminous coal could not under existing conditions be forwarded before the close of navigation, and that an adequate supply was necessary to the national defense and security. He, therefore, ordered railroad companies serving Lake Erie ports in the transportation of bituminous coal for transshipment to Lake Michigan and Lake Superior ports, daily until further order to give priority in the distribution of cars to coal mines served by them, and in the transportation of these cars to lake ports. Water carriers were ordered to receive and handle such coal so as to give it preference in transportation.

The effect of this order, in combination with the arrangement for the pooling of ownership of coal at lake ports referred to elsewhere,¹ was to avert the threatened coal famine in the northwest, and to provide that section with slightly more fuel than it possessed at the corresponding date in 1916. In fact it was announced on November 10 that the priority order would soon be rescinded in full because the demand for coal nearer the mines was equally urgent with that in the northwest, and because any shortage in the northwest that could not be met during the remaining days of lake navigation could be made up by rail shipments. At the same time, a suspension of the priority order was announced for twenty-four hours on November 19 to permit operators to supply industries in Ohio and Michigan. The original task contemplated was the transportation of 29,000,000

¹ See page 28.

tons of coal during the season of navigation. On December 1 there had been transported 27,072,290 tons, which was an increase of 5.7 per cent over last year's figures for the same date.¹

A second exercise of authority under this statute was also occasioned by the coal situation. It appeared increasingly evident that coal shipments were being impeded by the selfishness of shippers and the indifference of some carriers, in using coal cars for less important purposes. Automobile concerns and many other shippers who could use open top cars to advantage were loading these cars instead of returning them empty to the home road, in accordance with the requirements of the existing car service rules, and many railroads seemed unable to withstand the pressure of the shippers' demands. The state of Ohio even had been using six thousand cars weekly for road building materials. Judge Lovett, in his first order, had required that "priority should be given" to cars of lake cargo coal. While the meaning of the word "priority" would seem to be fairly clear and definite, some shippers and carriers insisted that in its implication there was an element of discretion. Accordingly, at the suggestion of the railways' Car Service Commission the second order was so worded as to leave nothing in doubt. Railroads were required, beginning with November 1, to "deny the use," except in shipments for the United States government, of open top cars for the transportation of materials *other than coal* for highway purposes, for construction and repair of buildings for amusement, or for manufacture of pleasure vehicles, furniture or musical instruments; and for transportation of passenger vehicles, furniture or musical instruments. The order specifically named the commodities to which open top equipment should in the present emergency be devoted; namely, coal, coke, ore, limestone for blast furnaces, raw materials for sugar and fertilizer industries, and other commodities necessary for the national defense and security. It was estimated that by this

¹In addition the northwest has received all-rail from Illinois and Indiana nearly three times as much coal as it received last year.

order the coal movement could be increased 600,000 tons per week.

Whether even this drastic order would solve the coal problem in all its ramifications seemed doubtful. A pool of freight cars similar to that instituted in the case of box cars was being considered,¹ and plans were under way to pool the output of coal mines for the purpose of relieving congestion and facilitating distribution to consumers.

Some of the most effective work of the War Board has been accomplished through its subcommittees. The close working relationship of the Commission on Car Service and the Interstate Commerce Commission's Bureau on Car Service has already been described. The results of the car efficiency movement have been made the subject of a separate chapter, but the other committees have accomplished results well worthy of special mention. The subcommittee on Military Transportation Accounting, as already indicated in the chapter on Organization, has a representative at each quartermaster depot and at each mobilization and concentration camp, to cooperate with the local quartermaster in the issuance and accomplishment of government bills of lading for freight shipment, and transportation requests covering the handling of troops. This committee has materially assisted in expediting the handling of troops and supplies by promulgating details to guide the railways in all accounting features relating to way-billing materials for camp construction and the later provisioning of the camps, and has worked toward the more prompt settlement of accounts with the government. Instructions have been issued to way-bill all government freight through to destination whether through rates and divisions prevail or not. Special way-bill envelopes and cards to be attached to cars have been devised to expedite government freight. The most important and far reaching activity of this committee has been its determined advocacy of universal interline way-billing.

A Central Accounting Bureau, under the direction of this

¹See page 29.

committee, has been established in Washington to which go all accounts of all railways against the government, where they are settled direct with the office of the quartermaster general. Heretofore, all settlements have been made with the depot quartermasters, with the result of much waste time and inefficiency.

The subcommittee on Military Equipment Standards has prepared plans and specifications for the various modifications needed to convert existing equipment into hospital and troop trains, all of which have been accepted by the government. It has received and considered various suggestions for modifications in equipment submitted by government officers and others. It has designed some equipment of a distinctly military character—notably an armored car. Through the Master Car Builders' Association it has secured incorporation in the car interchange rules of permission to load freight cars of 80,000 pounds capacity and over to full axle capacity; it has drawn up plans for uniform and proper loading of guns, uniform rules covering responsibility and billing for repairs to equipment used in military movement, and various instructions concerned with expedition, interchange and repair of cars. It has been burdened as has many another organization, public and private, with the man possessing an invention that is to save the world. Out of the multitude of cranks and crooks, there sometimes appears one whose suggestion commands attention. With the possibility of discovering such an one, much valuable time must be wasted on the others.

In a time when the demand for steel and other raw products, both for military and commercial purposes, is unprecedented and far beyond the country's productive capacity, it becomes a serious question who shall get the output. Ought this to be left to the relative strength of the competitive bidders? Experience says "No," for every country that has tried it has found it suicidal, and has eventually abandoned it. And so have we, after learning from our own experience rather than from that of the countries that had tried it before. The situation here is now in the control of the Priority Committee of the War Industries Board. It is as a connecting link between this Priority Committee and

the railways that the subcommittee on Materials and Supplies of the Railroads' War Board has performed its most useful service. It has thoroughly familiarized itself with the condition and needs of the individual railways with respect to material, such as relaying rail, locomotives, locomotive boilers and the like. It has investigated the capacity of the different car and locomotive plants, and their situation with respect to materials and supplies, with the purpose of assisting the different plants in obtaining the necessary materials. It has had close working arrangements with the steel companies and has been instrumental in promoting conferences between the steel and car companies on the problem of building material. It has secured a modification of the Shipping Board's embargo on lumber so as to secure lumber for car repairing. Finally, it has been the spokesman of the railways individually and collectively before the Priority Committee of the War Industries Board in urging preferred delivery of necessary materials. Its efforts in this direction have not been wholly without result. While each instance has been handled as conditions warranted, the Priority Committee has recognized the imperative character of railway demands, and has generally given them a Class B1 rating which is the highest rating given to any claims except those of actual war work.

The subcommittee on Military Passenger Tariffs, after extended negotiations with government officers concerned, worked out complete routings of troops between the Mexican border and military posts and Atlantic and Gulf ports, between home stations and mobilization points and cantonments, and between cantonments and Atlantic and Gulf ports. These routings have been arranged with a view to the consolidation of movements by the most direct and serviceable lines, with the special object of furnishing maximum facilities and the greatest efficiency consistent with the avoidance of congestion and delay. Actual experience with these routings under which an army of over one million men with its impedimenta has been moved, has demonstrated the efficiency and wisdom of the plan; for by keeping traffic spread over different lines it has been able to move trains

abreast without seriously taxing the facilities of the carriers. This committee has been influential in completing the agreements for a standardized net fare. This has been brought about by regular monthly rate conferences at which net fares have been computed and stated. To these conferences representatives of the government are invited. The tangible results of these agreements are the elimination of controversies between the carriers and the government and the promotion of prompt and uniform settlement of accounts. Similar in function is the subcommittee on Military Freight Tariffs which has developed a simplified basis for way-billing and assessing freight charges on impedimenta accompanying troops. This has been in part accepted by the government with the probability of complete adoption soon. It has also proposed the publication of military freight tariffs in a simplified manner which shall show net rates on government shipments to the various posts and cantonments. This committee has worked out the methods of identification of preferred freight which have contributed materially to expeditious movement of government materials.

The subcommittee on Express Transportation has provided a means by which the government may reach the express organizations in every part of the country with the minimum of delay. The Food Administration and the various branches of the army and navy have dealt with this committee. It has also assumed the task of expediting essential express traffic, a task of no mean proportions in view of the additional burden thrown on this service by the congestion and embargoes on less-than-carload freight.

The accomplishments of the subcommittees of the War Board just outlined give some suggestion of the manner in which the transportation system of the country is woven into the very texture of our war administration. But the relationship may be looked at again from another angle. There has been devised a complete system of cooperation between the quartermaster department of the army which is charged with all transportation functions, and the carriers. This system begins in the office

of the quartermaster general and spreads out to the remotest mobilization camp. General agents of transportation have been appointed and assigned to duty in the office of the quartermaster general in Washington, at military headquarters of the six departments, and at each of the mobilization and concentration camps. Their duties are to assist the quartermasters in securing equipment, routing troops and supplies, prompt loading, unloading and return of equipment, and in oversight of all the many details of railway operation. They are to keep in touch with the Commission on Car Service in Washington by means of daily reports. At the request of the quartermaster general, the railways have assigned representatives to each of a number of ports to act as advisers to the local quartermasters in handling government freight for oversea shipment. An expert on operation has been assigned to the office of the quartermaster general to furnish advance information to the Car Service Commission on government orders for freight and the need of cars. This arrangement was perfected when it became apparent how large the government demand for equipment would be in connection with the construction of cantonments. Roads are supplied with information whenever orders are placed by the government for more than ten carloads of materials. The government issues orders to the railways concerned, indicating cars wanted, and specifying the time within which they must be delivered. These cars are to be held exclusively for government account. To assist in the movement of troops a qualified official of the passenger department has been assigned to service in the office of the governor or adjutant general of each state where necessary, to keep in touch with state authorities during periods of mobilization.

For the movement of the National Army 4,531 points were designated by the provost marshal general for local concentration, from which the railways were to carry the troops to the cantonments. The railways were directed to prepare train schedules for each movement. Under the supervision of the subcommittee on Military Passenger Tariffs, these were prepared

by the passenger associations in conference with representatives of the operating departments. These schedules showed the date and hour of arrival of trains at concentration points with schedule to destination. After approval by the quartermaster general they became the official routes and were furnished to the railways concerned.

On October 6, the War Board announced that the railways had moved to date approximately 720,000 soldiers from their homes to training camps or embarkation points. All but 32,500 men in the first five per cent of the National Army required special train service, involving 13,500 passenger cars, including 1,500 Pullman and tourist sleepers, 2,000 baggage cars, and 4,500 freight cars. In the handling of the National Army, the longest haul was from Yuma, Arizona, to Fort Riley, Kansas—1,514 miles, consuming forty-eight hours; the shortest that of the District of Columbia unit to Camp Meade, Maryland—less than twenty-five miles. The National Guard movements were mostly of great length, the longest being a battalion of engineers from San Francisco to the Atlantic coast. Although nearly 90 per cent of the mileage of American railways is single track, all this was accomplished without serious derangement of passenger schedules, notwithstanding that the railways were at the same time handling large amounts of government material in freight trains and absorbing an enormous additional commercial traffic as a result of the war. On December 6, 1917, the troop movement of the railways amounted to a total of 1,867,248 men.

In the handling of materials for camp construction, the railways have shown the same efficiency. Within thirty days from the date that the government placed its first order for cantonment materials, the railways had delivered more than 12,000 carloads of lumber and other building materials to the sixteen cantonments, and they had built many miles of extra trackage at their own expense for the local handling of government freight. Shipments of food and materials continue uninterruptedly, the number of cars of material of all kinds arriving at army camps having reached on December 1, 1917, a total of 128,350.

A discussion of cooperation between government and railways would not be complete which did not allude to the many points of contact between official departments and bureaus, other than those strictly military, and the railway administration. However, no adequate discussion of this relationship is permissible here, partly because in many cases it is not clearly defined, partly because it is undergoing rapid transformation and development. Nearly every important agency of government with national responsibilities now has its transportation official who is responsible for these special interests in his department. He has seldom acted independently, but almost invariably in cooperation with the Railroads' War Board, or one of its subcommittees. The most striking illustration of this spirit of cooperation is found in the Fuel Administration whose sole problem has been the one with which the railways have for months been most vitally concerned. The Pennsylvania Railroad has been obliged to resort to confiscation in order to secure coal necessary for operation, thus disturbing commercial contracts. After protracted conferences between representatives of the Railroads' War Board, the Commission on Car Service, the Priority Board, the Fuel Administration, and the Interstate Commerce Commission, an order was issued by the Fuel Administration on October 10 directing that the 700 mines serving the Pennsylvania Railroad should supply that company with coal on a pro rata basis. This order was later extended to other roads, and orders are in preparation for the application of priority principles to the handling of commercial coal, as between the government, public utilities and private industries. The Railroads' War Board has furnished a list of more than 500 commodities classed as non-essential to the Priority Director and the Fuel Administration, upon their request. While both these officials have declared against drastic and sudden action, it is evident that they are preparing against a time when power to order preference in coal shipments shall be exercised in the interest of those industries essential to national security. Early in November the Fuel Administration ordered all transshippers of coal at the Atlantic ports to cooperate in the

Tidewater Pool.¹ This pool or exchange had been in operation since June, but a number of shippers had declined to join.

Cooperation similar to that just described is found between the Food Administration and the railways. The head of the transportation division of the Food Administration is a vice president of one of the larger railways, and an expert on operation. Traffic congestion in food products, shortage of facilities, and the classification of foods according to relative importance for shipment are problems with which he has been concerned. In Chicago close cooperation has been established between the railways and the Food Administration by which delayed cars of perishable foodstuffs are reported to the food authorities. The latter investigate the detention, determine responsibility and take steps to avoid a repetition. They have also arranged for systematic salvage of all food fit for use. The Food Administration has also used its influence in furthering the drive for heavier car loading, going to the extent at times of issuing definite orders governing certain kinds of freight. The Departments of Commerce and of Agriculture have circularized the country in aid of this same movement for an intensive carload.

The significant point in all these movements on the part of the government agencies to promote efficient railway service, is that rarely has any step been taken without conference with the official representatives of the railways of the country or without their full cooperation. Even where government agencies have had power to issue orders, they have in no case acted without consultation and approval of the railway heads and frequently only upon request of the railways. The transportation job has been performed by a private agency under private control practically unfettered by the interference of any government authority.

Other instances of cooperation between government and carriers may be noted briefly, merely to illustrate the rapidly increasing scope of this cooperative movement.

At the request of Chairman Willard of the Advisory Com-

¹ See page 28.

mission, the Railroads' War Board submitted suggestions to the Council of National Defense as to the composition of the railway commission to be sent to Russia, and it was constituted in accord with their suggestions.

The proposal for the enlistment of regiments of railway men for service in France came to the War Board through Mr. Willard. Mr. S. M. Felton, President of the Chicago Great Western was requested to undertake the work of organization. In June, 1916, as a result of a conference with the Secretary of War, Mr. Felton, who had earlier been the chief executive of the Mexican Central, was requested to organize railway men and materials for possible operations in Mexico. Equipment of all kinds necessary for such an expedition was collected and men were selected and organized. To this same executive, the Board now turned in the face of the country's larger need. A preliminary engineering mission was sent to France to gather information concerning requirements. The organization now at work in France, consists of nine regiments; three for operation, five for construction, and a shop regiment. Each operating regiment comprises a complete operating unit capable of taking over a line 100 miles in length and operating it for military purposes. The construction regiments are to reconstruct destroyed railways and maintain existing ones. The shop regiment constructs and repairs equipment. Each regiment has as its colonel and as its captain adjutant, a regular army officer. The lower grades of officers and the privates are all recruited from the railway service and consist of men peculiarly fitted for the tasks ahead of them. Coincident with the organization of these units, the War Board has canvassed the country for the materials necessary to railway rehabilitation, and has been largely instrumental in their mobilization and export. Under a general order issued by the War Department in September, these railway regiments are to be increased in size and number by voluntary enlistment or draft, and their organization perfected for service abroad. Following this same general plan, a Railway Service Corps has been recruited from operating and mechanical officers for service in

Russia, particularly on the Trans-Siberian railway. This is one of the tangible results of the visit of the Stevens Railway Commission to Russia. This corps is to act as instructors and to build up an operating organization of which there is an almost entire lack in Russia.

At the instance of the Railroads' War Board, there was organized in September a committee to devise means of preventing congestion at American seaports. This committee, known as the Coordinating Committee of Exportation, consists of representatives of the Commission on Car Service, the Shipping Board, the Food Administration, and the Red Cross War Council, and the Traffic Executive of the Allied Governments.

The New York Port War Board organized in November to relieve congestion at the port of New York and to develop co-operation in the use of terminal facilities, of which the Secretary of the Treasury was chairman, has upon it a railroad representative. In December a committee of railway traffic officials was established in New York to adjust transportation service to traffic facilities.

In response to appeals from the railways for the suspension of certain statistical and accounting requirements because of the depletion of clerical forces in the accounting departments, the Interstate Commerce Commission has suspended its order requiring the separation of operating expenses between passenger and freight services, and has eliminated a large amount of statistical and accounting data from its annual report form for the current year.

A Committee on Waterways has been created under the jurisdiction of the Council of National Defense to study the possibilities of the development of water transportation, particularly on the Mississippi river. That such an organization is welcomed by the railways is shown by the letter of the War Board to the Chief of Engineers in June in which they announce their willingness cordially to cooperate with any responsible persons or corporations providing water transportation, by exchange of traffic, joint bills of lading, and by joining in the construction of connecting tracks.

The Council of National Defense in November created a Highway Transport Committee to study the possibilities of motor truck transportation and devise plans for supplementing railways by transporting freight into congested terminals with motor trucks. Package freight is now being handled to a considerable extent in this fashion between some of the large cities—for example, New York and Philadelphia—and this method, if extended, offers possibility of material relief. Finally, the American Electric Railway Association appointed in November a War Board similar to that of the steam railways, to work in close cooperation with the Council of National Defense. It plans to coordinate its facilities, supplement steam roads, and do some of the business that the steam railways have been compelled to surrender to governmental requirements.

CHAPTER VI

The End of Voluntary Cooperation

In spite of all efforts to speed up their plant to its highest pitch of efficiency, railway executives began to realize early in November that they were facing defeat unless more drastic action were possible.

Leaving no stone unturned in their efforts to avert disaster they urged not only car economy but a diminution of traffic. The Railroads' War Board joined the Food Administration in its campaign of conservation. It urged that we must use food and fuel economically; we must subsist so far as possible upon local products; we must above all things refrain from the purchase and use of luxuries and non-essentials. It used its influence to stem the growing tide of passenger travel, a large part of which was purely for pleasure. Reduction of the number of passenger trains on the schedule often resulted only in operating a train in sections. The matter of increasing passenger rates as a deterrent to travel was considered, but such a procedure would require approval of the Interstate Commerce Commission and would have to run the gauntlet of all the state commissions in succession. Yet only through such radical curtailments as have been mentioned can track and rolling stock be made available to the extent required for our country's use. Thus from still another side the attack was begun upon the unessential industry which, as many had long ago foreseen, must be sacrificed eventually in the interest of our great undertaking.

It is in softening the rigors of the adjustment process, in the transfer of capital and labor from non-essentials, that the electric railways plan to perform an immediate service and for which they have created a War Board, earlier referred to. With the curtailment of passenger service on the steam roads, the electric railways will undertake to perform a large local service. As non-essential commodities are refused transportation on the

steam roads, they will find a degree of relief in transportation over limited area by electric lines. There are nearly 50,000 miles of electric railways in the United States. It is the plan to arrange a system of traffic interchange between the steam and interurban lines and between the electric lines themselves. An important service will be performed in conjunction with the Food Administration in the collection of food products from the farmer and their distribution to wholesaler and retailer.

While the efficiency of operation in the autumn months of 1917 continued to increase over that of a year ago, the *rate* of increase was declining, and at the same time demands for transportation continued their uninterrupted course. The acute nature of the problem arose from two conditions. First, the speeding up of the industries concerned with war making—many of them to a twenty-four hour basis—had created an abnormal demand for fuel and new materials and an unprecedented call for transportation to handle the finished products. These industries are largely situated in the eastern part of the country through which most of the export traffic passes, creating a congestion on eastern lines which mileage in other parts of the country is unable to relieve. Second, although the railways had placed themselves under orders from the Railroads' War Board, this had meant thus far that each executive still handled the business which would be his in normal times, still dealt with his own customers, and was subject to the War Board only in the sense that he endeavored to carry out on his line the efficiency measures designed in Washington. There have been departures from this procedure, notably in the pooling of all box cars, but as a rule, the independent identity of the individual railway has been maintained. Any other policy could have been justified only in the case of extreme war necessity, for it would have meant a deliberate violation of existing laws—the provisions of the Interstate Commerce Act forbidding pooling and discrimination and those empowering shippers to route their freight. Likewise, the railways would have faced the penalties of the Anti-trust Act.

But the inevitable emergency came upon them in November, and in the last week of the month the War Board made announcement that "all available facilities on all railroads east of Chicago will be pooled to the extent necessary to furnish maximum freight movement." This announcement was given definite expression in the appointment of a committee of seven operating executives of eastern roads to have full charge of this thorough-going railway pool. How radical a revolution could be effected in railway operation remained to be seen, but the executives were determined to go as far as the law would permit. That federal laws might be formally amended or even disregarded under the war emergency was a possibility, but they realized the difficulties in the way, particularly those growing out of the prerogatives of the state regulating bodies. What the situation required was the abolition of the private routing of freight and the appointment of a controller of traffic to determine routing and priority. Individual lines should be confined to the handling of the specific commodities which they were by situation and facilities best equipped for handling. This might necessitate the abandonment altogether by some lines of their through passenger business, and also of a large part of their long distance less-than-carload traffic. Pooling of facilities of all sorts, such as cars, locomotives and terminals, as well as repair shops and labor force, was in contemplation, and petitioning Congress for authority to pool revenues was under consideration. It was obvious that the consent of individual roads to the pooling of trackage and distribution of business by a central agency could not be secured unless revenues were likewise to be pooled.

The necessity for a controller of traffic arose mainly out of the confusion that had resulted from a too generous use of the "preference tag" in the shipment of government freight. Every department and bureau has used these tags with congestion as the result. It is a fundamental principle of railway operation that the best results are provided by a steady flow of all traffic concurrently, and that the introduction of the preference plan slows up the entire transportation machine. The vast amount of

preference freight pushed upon the railways by eager government officials, minor and major, has had the inevitable result of defeating its object. It would seem now to be necessary to carry the principle further and arrange for preferred preferences, to classify this freight on the basis of urgency. Such a controller would have power, for example, to divert food products, consign them to the Gulf ports for export, and forbid their routing through the congested areas of the east. The plan would involve a survey of the coal situation with a view of shortening hauls and eliminating cross hauls, and a general pooling of coal at the mines.

The committee of seven operating executives met on November 28 in Pittsburgh where, in the heart of the congested district, they established headquarters. The orders issued on the first day gave promise of the vigor with which they were to undertake their task. These orders included an embargo on shipment of all export raw steel products, except those intended for the United States government; the diversion of through freight from the Pittsburgh gateway to other lines; the discontinuance of the "Broadway Limited" on the Pennsylvania Railroad; the immediate suspension of fast freight lines, and the provision of only box and stock cars for the team track loading of coal. Moreover they inaugurated a plan for cooperation with representatives of America's allies in the ports, with a view to the limitation of export traffic to a quantity for which shipping was available.

Congress met the first week in December and there at once appeared a flood of ill considered proposals for the solution of the railway problem. But before any of these proposals had reached the point of consideration there suddenly appeared, on December 6, a document having behind it the weight of long experience and matured judgment. It was a special report of the Interstate Commerce Commission to Congress. This report called attention to the enormous increase in traffic that had taken place since the outbreak of the war and the strain which this

traffic had placed upon the facilities of the carriers—a burden which they had been unable to meet because of the competitive demands for capital. Moreover it was pointed out that, even if capital were available, the necessary facilities could not readily be obtained because of the demands for building materials and equipment to meet war needs. It was the opinion of the Commission that during the war the competitive principle under which the roads had been built up and in conformity with which our regulating statutes are framed must give way to a policy of unification in which individual interests are merged in a national transportation system. The Commission saw but two ways in which this could be accomplished,—either by a unified system operated by the carriers themselves, or a system operated as a unit by the President during the period of the war under the war powers vested in him by the Constitution or those conferred upon him by Congress. If the first alternative should be adopted, it was the opinion of the Commission that the operation of the anti-trust laws—except in respect to consolidations or mergers of parallel and competing lines—and of the anti-pooling section of the Interstate Commerce law, should be suspended. The government should grant financial assistance in the form of loans or advances for capital purposes, and the regulation of security issues should be vested in some appropriate body.

If the second alternative be adopted, there should be suitable guaranty to each carrier of an adequate annual return for the use of the property, and for its maintenance during operation, and a fair provision for improvements and betterments. “In our opinion,” said the Commission, “the situation does not permit of temporizing.” Commissioner McChord, in a separate statement, expressed his belief that no voluntary committee of railway men could accomplish what the situation demanded. He called attention to the hampering consequences of the conflicting powers now existent in various governmental agencies and insisted that “the strong arm of governmental authority is essential if the transportation situation is to be radically improved.”

Here endeth the first chapter of the history of the war administration of railways in the United States. While voluntary cooperation of carriers has not been a complete failure, it can by no means be regarded as an unqualified success, and a large part of the responsibility for this situation must be attributed to conditions other than inefficiency of private operation. These conditions have already been discussed, but they may be summarized here. First and foremost is the existing legislation, framed for other days and enacted for the purpose of preserving the competitive principle, the Anti-trust Act and the anti-pooling section of the Interstate Commerce Act, together with all other legislation granting privileges to shippers and protecting them against discrimination. Then there is the decentralized condition of government authority that has resulted in conflict of instructions and a failure to work out thoroughly and effectively the principle of priority. Other hampering influences have been the obstructions and delays interposed by state regulating bodies, the priorities exercised by the government in building materials and in rolling stock, the selfishness of certain groups of shippers and to some degree the lack of compliance by individual railways. The steadily mounting costs of operation have been an important factor, as well as an absolute inability to secure new capital. Finally, there has been the necessity of coping with a wholly unprecedented traffic, congested in a relatively narrow section of the country, with the difficulties of movement materially increased by an inadequate supply of shipping and a lack of organization and coordination of loading facilities. In the face of all these handicaps, the record of the railways as shown in the statistical results of freight operation is extraordinary, a result that would have been wholly impossible without the cordial cooperation of carriers and shippers in every detail of traffic handling. When it is kept in mind that railways have been built under the stimulus of competition, that they have been regulated on the competitive theory, and that in consequence their entire system of organization and management has been shaped in the competitive mold, it is no surprise that

time has been required for an adjustment to new conditions and to a substitution of the principle of cooperation. That the railways will now welcome the aid of Congress, acting upon the considered judgment of the Interstate Commerce Commission, there seems to be no question.¹

¹ These words were in type before the President's proclamation of December 26 was issued, placing the railway system of the United States under government control. Appendix E, page 149, contains the proclamation in full.

ADDENDUM

The Labor Situation

It is impossible, so soon after our entrance into the war, to present any adequate picture of the labor situation on the railways. Lack of labor has itself been responsible for the fact that accounting and statistical records have fallen behind and that no summarized presentation of the wage and employment situation has been possible for any considerable group of carriers.

Long before our entrance into the war, railways traversing manufacturing sections were losing their men to munition plants and other industries, some roads turning their mechanical forces over two and three times in the year. Wages were steadily rising and the quality of service was, because of war pressure, steadily falling. With the inauguration of the draft, the situation became still more acute, invading not only the mechanical forces, but all departments of the railways.

Since then the experience of railways throughout the country has been the same, a constant struggle to hold their organizations together, and continuous concessions in wages. Former methods of negotiations have been abandoned; threatened strikes over night have necessitated adjustments on a few hours' notice to avoid the breakdown of the organization. Very considerable increases in wages ranging from fifteen per cent to seventy-five per cent have taken place in the classes of telegraphers, station clerks, platform labor and the like, and among the mechanical forces wages have soared to unprecedented heights. One of the classes that has received the largest percentages of increase is that of unskilled labor.

Railway switchmen have a national union of about 20,000 members, which has been active for some time in the matter of wage demands. Early in November the union formulated a demand, which is still in the negotiation stage, for an increased

wage rate of fifty per cent, time and a half for overtime, and changes in working regulations designed to benefit the men.

In the emergency nearly all railways have turned to the employment of women. This class of labor has of course always been largely in use in clerical and stenographic employment, but even in these capacities it has been materially increased. But its use in an experimental way has now been extended into fields hitherto denied to women, such as the lighter mechanical work in shops, and as car cleaners, painters, warehouse clerks, draughtsmen, and common laborers; telegraphers, despatchers, signalmen, watchmen and bridge tenders; storeroom attendants, scrap dock employes and even in some few cases section gang employes, although in the latter case experiments have shown that in general the work is too heavy for women. Finally women are being introduced into work as station agents, ticket sellers, ticket collectors, attendants in check rooms and information bureaus and similar employments.

They are receiving in general the same pay as men. Their introduction into the mechanical forces and similar employment is hampered by state statutes concerning women's labor, by lack at present of adequate provision for their comfort and welfare, and more particularly by the opposition of trade unions, which in many cases is embodied in formal agreements. While there is some difference of opinion among operating executives as to their relative efficiency when compared with men, the preponderant opinion is that they are equally efficient and in many cases much more efficient in clerical work, and that in the lighter mechanical work for which they are fitted they are when trained as efficient as their male competitors.

Many roads have established schools for the training of women, particularly in the field of telegraphy, despatching and signaling, and the probability is that if the war is prolonged, there will be a gradual and increasing substitution of women for men in the clerical and lighter manual tasks. That this will raise a new problem when the war ends is fully appreciated by the unions.

The labor problem, so far as it affects train operation, concerns itself with the activities of the four brotherhoods, which include in their membership nearly all of the men in the classes of locomotive enginemen and firemen, conductors, brakemen, flagmen and other trainmen, approximating 350,000 men. It will be recalled that a nation-wide strike of all these employes set for Labor Day, 1916, was only averted by the passage by Congress thirty-six hours earlier of the Adamson Eight Hour Law, providing that eight hours should be the standard of a day's work, with overtime at the end of eight hours, and that the existing standard wage for the nine or ten hour day should not be reduced. Appeal was taken to the Supreme Court to test the constitutionality of the act. With the certainty that the United States would enter the war and the fear that if we did so, there might be obstacles to the attainment of their goal, the brotherhoods on March 15, without waiting the decision of the court, renewed their negotiations with the railways. Meanwhile the railways had been keeping the records of their men in accordance with the requirements of the Eight Hour Law, so that they might comply retroactively should the court uphold the law. The determination of the brotherhoods to force the issue in advance of any emergency was clear when they called a strike, which they postponed for 48 hours only at the solicitation of a committee of the Council of National Defense, with which the contending factions entered into conference. The outcome was that the railways yielded their position in the interest of national safety, and granted the basic eight hour day without reference to what the Supreme Court might decide. A few hours later on March 19, 1917, the court upheld the law as constitutional.

Here the matter rested until November, when the increasing cost of living and the wage increases being granted in other industries produced an uneasiness among the rank and file of some of the trainmen's organizations which it was apparently impossible for the leaders to suppress. When it became clear that definite demands for increases were being formulated and that, in spite of the efforts of the official federal mediator, a clash was impending, the President called the leaders of the four brother-

hoods into conference on November 22. The public information concerning the results of this conference is contained in two statements, one of which was given out by the brotherhoods and was as follows:

The men who comprise the railway brotherhoods are thorough Americans, therefore they believe in American standards of living, and in consequence of this realize that standards of pay that were established in 1912 and 1913 are inadequate to meet present-day prices for commodities, and for that reason are demanding an increase in present rates that will meet half at least of the increase in cost of those things which they are compelled to purchase.

They want to cooperate in every way that is at all possible in the successful prosecution of the war, and they fully realize that the most serious thing that could occur during the conduct of war would be any interruption of railway transportation, and they, in common with the great body of the people, are determined to do everything within the bounds of reason to avoid such interruption.

Being fully conversant with their attitude and desire in this matter, we are in a position to give the assurance that, if the situation should arise which would threaten the interruption of transportation the men whom we represent would be more than willing to discuss and consider any solution of the difficulty which presented itself, doing so in the spirit of patriotic cooperation, and would undoubtedly cooperate with the government to the utmost extent in arriving at a just, equitable, as well as patriotic conclusion.

The other statement was the President's to the effect "that he had got from the interview exactly the impression conveyed by the statement of the heads of the brotherhoods, namely, that the men whom they represented were not inclined to contend for anything which they did not deem necessary to their own maintenance and the maintenance of their families, and that they would be willing in case any critical situation of controversy should arise to consider any proposed solution in a spirit of accommodation and of patriotic purpose."

On November 19, the Railroads' War Board, on behalf of the railways sent the following letter to the President:

We confirm what we said to you this morning in reply to your inquiry as to what will be the attitude of the railroads with respect to the manner of settlement of any demands for increases in pay or changes in working conditions which during the war may be made upon them by employes.

Speaking for the railroads today, we reiterate our belief in, and general acceptance of, the principle of arbitration. In the midst of war we are, however, prepared to go further. As no interruption of continual railroad operation can be tolerated under war conditions, we are ready, should any crisis now arise, unreservedly to place our interests in the hands of the President for protection, and for disposition as he may determine is necessary in the public interest.

On December 1 the Order of Railway Conductors and the Brotherhood of Railroad Trainmen presented practically to every railroad in the country a demand for increased wages approximating forty per cent. The Brotherhood of Locomotive Firemen and Enginemen has the question of increased wages under consideration.

The statement has been repeatedly made that the brotherhoods have agreed not to strike during the period of the war, but diligent search fails to reveal any authority for this assertion. The leaders have been careful to clothe their expressions in words sufficiently vague to permit a generous elasticity of policy. In addition to the statement of November 22 already quoted the only other official statement of policy is the letter to the President on March 13, in which they said:

We are very hopeful of working out a satisfactory adjustment with the railroads, but if while we are negotiating our country should become involved in war, we want to assure you, as Chief Executive of the nation, that we and the membership we represent, can be relied upon to support you to the fullest extent, and that yourself and the nation will have our hearty and full support.

This letter may have cheered the President, but it certainly was no pledge to avoid a strike.

PART II—GREAT BRITAIN

CHAPTER I

Organization of the British Railways for War

Study of the British transportation structure under war conditions, as exemplified during that period of the war from 1914 to the end of 1917, falls into a number of subdivisions, as follows:

1. Legislative steps leading up to government control of the British railways in war time;
2. Historical development of the organization to which railway operation was assigned at the beginning of hostilities in 1914;
3. Financial agreement between the government and the railways under which they have been operated, and its several modifications;
4. Problems connected with railway labor; wages and bonuses; the employment of women; trade unionism;
5. Operating efficiency, economies in operation and restrictions of traffic;
6. Rate changes, freight and passenger;
7. Financial results of operation.

Great Britain and Germany went to war on August 4, 1914. Beginning at 12:01 a.m. on August 5, or less than twenty-four hours after the formal war declaration, virtually the whole railway system of Great Britain (England, Scotland and Wales) was under operation as a single unit by a central Railway Executive Committee vested by the government with broad powers. The plan and form of control was decided on by the government on August 4; the financial agreement underlying the plan was worked out and settled within a few days.

The official announcement of the British War Office regarding this event was issued on August 4, and read as follows:

An Order in Council has been made under Section 16 of the Regulation of the Forces Act, 1871, declaring that it is

expedient that the government should have control over the railroads in Great Britain. This control will be exercised through an executive committee composed of general managers of railways which has been formed for some time, and has prepared plans with a view to facilitating the working of these provisions of the act.

Although the railway facilities for other than naval and military purposes may for a time be somewhat restricted, the effect of the use of the powers under this act will be to coordinate the demands on the railways of the civil community with those necessary to meet the special requirements of the Naval and Military Authorities.

More normal conditions will, in due course, be restored, and it is hoped that the public will recognize the necessity for the special conditions, and will, in the general interest, accommodate themselves to the inconvenience involved.

The Railway Executive Committee's own announcement was as follows:

In view of the announcement made that the government have taken over the control of the railways, it is desirable that the public should understand exactly what this means.

The control of the railways has been taken over by the government for the purpose of ensuring that the railways, locomotives, rolling stock, and staff shall be used as one complete unit in the best interest of the state for the movement of troops, stores, and food supplies.

The necessity for this action must at once become apparent when it is realized that certain ports, through which the bulk of our food supplies enter this country, may be closed for the purpose of such food supplies, and in that event the rolling stock, locomotives, etc., may have to be diverted to other lines for the purpose of serving other ports.

The staff on each railway will remain under the same control as heretofore, and will receive their instructions through the same channels as in the past.

On behalf of the government, the control of the railways in Great Britain has been vested in a committee composed of general managers. . . .

The official chairman of this committee is the president of the Board of Trade, and the acting chairman is Mr. H. A.

Walker, general manager of the London and South Western Railway.

The railway secretary to the committee is Mr. Gilbert S. Szlumper.

We are officially advised that in order to give due effect to the instructions received from the War Office and Admiralty for the movement of troops, etc., it may be necessary to discontinue at short notice a portion of the advertised service, or to close certain of the lines against ordinary traffic. Under these circumstances no responsibility can be accepted for any delay or loss that may arise.

Three questions present themselves for consideration: First, under what law or series of laws was this action of the British government possible; second, what were the history, composition and powers of the central Railway Executive Committee; third, what financial and other arrangements did the government make with the railways?

In attempting to answer these three questions the extraordinary fact at once emerges that under legislation existent long before the war the government had power to take over the railways in time of emergency, that the law even specified the general terms under which the step should be taken, and that the instrument of control utilized in 1914 by the government—the Railway Executive Committee—had been in existence for some years. The three questions will be taken up in turn during the remainder of this chapter, and subjected to detailed discussion.

Briefly summarized, the legislation which empowered the British government to take over the railways was a series of acts passed by Parliament from 1842 to 1888, the most important of the series being the Regulation of the Forces Act of 1871. The body through which the government has operated the roads as a single unit is a Railway Executive Committee wholly composed of railway officials, so far as actual working personnel is concerned. Under the law the government was required to render the railways full compensation for loss or injury sustained because of government operation and control. This requirement was met by a voluntary mutual agreement between the govern-

ment and the railways by which the government undertook to maintain the net income of the roads at the same level as during the normal period just preceding the war, while the railways on their part not only were expected to expedite all military traffic and to subordinate their ordinary activities wholly and unreservedly to the exigencies of military needs, but also agreed to handle all government traffic, of whatever nature or extent, free of charge. Reduced to its simplest terms, we may regard the British system of railway administration under war conditions as a method of simplified and unified private operation under government control, with the integrity of railway net income assured by government guarantee.

To get the history of the legislation granting the powers and specifying the terms under which the British government took over the railways in 1914, we must go back to the early Victorian period. Section 20 of an Act of Parliament of July 30, 1842 (5 and 6 Vict., Cap. 55), providing for the better regulation of railways, and for the conveyance of troops, made it mandatory on the directors of any railway to move officers and soldiers, together with their baggage, stores, arms, ammunition, etc., "at such prices or upon such conditions as may from time to time be contracted for between the secretary of war and such railway companies." The phrase just quoted is significant, for it indicates that the transportation service was to be rendered under a voluntary and mutual contract between the railways and the government. It may, therefore, be regarded as the starting point for the series of legislative steps that led up to the revolutionary change of August, 1914, in the relation of British railways to the government.

The act of 1842 was broadened two years later so as to specify the maximum rates under which officers, soldiers, military baggage and military stores should be conveyed, although that act applied only to railways whose charters should be granted or amended *in the future*. The maximum rates imposed by this act of 1844 (7 and 8 Vict., Cap. 85, Sec. 12) were as follows: Commissioned officers, first-class passage, twopence per mile; soldiers,

one penny per mile, "in carriages which shall be provided with seats, with sufficient space for the reasonable accommodation of the persons conveyed, and which shall be protected against the weather"; excess baggage, one half-penny per pound (any distance); military stores, arms, ammunition, etc., twopence per ton per mile, "the assistance of the military or other forces being given in loading and unloading."

These acts of 1842 and 1844 may be regarded as progressive steps toward special treatment of railways under war conditions, in that they recognized military traffic as a preferential form of transportation business and also provided that it should be carried at special rates.

Further revision of military fares was made in the so called Cheap Trains Act of August 20, 1883 (46 and 47 Vict., Cap. 34). Section 6, entitled "Conveyance of the Queen's forces at reduced rates," laid down certain regulations as to the kind and class of service to be rendered by the railways in military transportation, and revised the rates to be charged, as follows: for officers, soldiers, and their dependents, three-fourths of the regular passenger rates up to 150 persons, and one-half for all over 150; personal baggage to be carried free up to certain limits, excess weight to be charged at two-thirds of the regular rates; military stores, same rates as under the act of 1844 just cited.

The most important step in this process of enlarging military control over the railway system was taken in the Regulation of the Forces Act in 1871 (34 and 35 Vict., Cap. 86). Section 16¹ provided that in case of emergency the secretary of state could be authorized by an order in council to empower any person or persons to take possession of any railroad in the United Kingdom, to use the same "at such times and in such manner as the secretary of state may direct; and the directors, officers, and servants of any such railroad shall obey the directions of the secretary of state." Such warrant could not be drawn for a longer period than one week, but was renewable "from week to week as long as, in the opinion of the said secretary of state, the

¹ The full text of this section will be found in Appendix B.

emergency continues." It is noteworthy that this emergency need not be a military emergency, the language of the act being as follows:

When her majesty, by order in council, declares that an emergency has arisen in which it is expedient for the public service that her majesty's government should have control over the railroads in the United Kingdom, or any of them, etc.

There was a later act, called the National Defense Act of 1888 (51 and 52 Vict., August 13, 1888, Cap. 31), which gave the government priority powers under emergency conditions; that is, power to dictate to the railways what precedence should be given to specific kinds of traffic. The provisions of this act were not called directly into play in 1914, for the Railway Executive Committee by the terms of its appointment and designation had power to dictate priority of shipments. In brief, a series of parliamentary acts, extending from 1842 to 1888, had laid the foundation for the governmental authority under which the railways were taken over in 1914.

The second question relates to the development and composition of the Railway Executive Committee to which the war operation of the British roads was entrusted. As to composition, all but one of the members of this committee were general managers¹ or other chief executives of important roads of Great Britain. The exception was the nominal or ex officio chairman, who was the president of the Board of Trade.² These general

¹ The general manager of a British railway corresponds to the railway president in the United States. He is the chief executive and operating official, and is responsible to his board of directors for the success of each year's operations.

² The British Board of Trade is a government body roughly corresponding to the United States Departments of Commerce and of Labor. Some of its duties are to collect trade statistics, issue patents, maintain standards of weights and measures, register railway and other joint stock companies, and administer certain industrial laws. Through its railway department the Board of Trade has certain powers of control over the British railways. The president of the Board, whose formal title is Secretary of State for Trade, is a member of the present cabinet.

managers were men who had already proved themselves fitted, through long years of railway training, to handle the operating and traffic problems of their respective lines, and could cooperatively continue to maintain, and if possible increase, such efficiency as had already been attained under peace conditions. Furthermore, the committee was in existence prior to the war and its members were already familiar, to some degree at least, with the nature and scope of their duties. In addition, they were all members of the Engineer and Railway Volunteer Staff Corps of the British army, with honorary military titles and rank.

The history and development of the Railway Executive Committee is briefly as follows. Its immediate predecessor was the War Railway Council, created in 1896 and designed to act in an advisory capacity to the Engineer and Railway Volunteer Staff Corps of the army. This War Railway Council comprised the deputy quartermaster general as president, six railway managers, one Board of Trade Inspector of Railways, two members of the Engineer and Railway Volunteer Staff Corps, the deputy assistant quartermaster general, one mobilization officer, two naval officers, and one officer of the Royal Engineers. Thus the Council consisted of fifteen members, six of whom were railway representatives, while nine represented the army, navy, and other branches of the government devoted to military activity. The duties of the Council were to advise the government regarding military rail transportation; to devise mobilization schemes both generally and in detail, in cooperation with the railways affected; to draw up regulations for troop movements, and to arrange for the provision of sidings, platforms, and other such facilities needed in troop transportation.

In 1912 the War Railway Council was superseded by the "Railway Executive Committee," which was organized as a group of railway managers who served as a link between the army and the railways. Before the war, dealings of this group were largely with the Engineer and Railway Volunteer Staff Corps, of which they were in fact members, and with the Director General of Military Transport. The Engineer and Railway Volunteer Staff

Corps had been organized in 1865 as a technical group of railway officials, engineers, and large contractors, who were usually given honorary commissions as lieutenant colonels in the British army. They were known generally as the Railway Staff Corps,¹ and for years preceding the war had been engaged cooperatively with the War Railway Council, and with its successor, the Railway Executive Committee, in working out plans and methods for the railway service in time of war. These plans contemplated the mobilization of troops, their transportation to points of embarkation for foreign expeditionary purposes, to training camps, or to concentration points within the country to repel invasion, and the handling of military impedimenta and supplies in whatever quantities should be found necessary. The plans were worked out in greatest detail, were tested on a small scale at army manoeuvres, and were modified from time to time in accordance with the dictates of experience or study. For several years before the war operating railway executives from time to time received sealed orders covering mobilization schemes in detail; these they were instructed to lay away unopened. On the outbreak of war these orders became automatically effective. Although the demands of the war on the British railways have been many times greater than could possibly have been foreseen, or than were provided for in even the maximum limits of the earlier mobilization plans, yet it is the general testimony of competent observers that the plans have proved sufficiently elastic to meet all the needs of the present system of warfare.

From the time of the organization of the Railway Executive Committee in 1912 until his death, Sir Frank Ree, general manager of the London and North Western, was acting chairman of the committee. The nominal chairman from the beginning was the president of the Board of Trade. Mr. Ree was succeeded by Herbert A. Walker of the London and South Western. The list of members of the committee as organized

¹ The Railway Staff Corps seems to have maintained its existence since the war, appointments being made to it from time to time, but for all practical purposes the work for the accomplishment of which the Corps was organized is being carried on by the Railway Executive Committee.

for war service was announced by the British War Office on August 4, 1914. Some changes and additions were made in the list after the first announcement, bringing the number up from eleven to fourteen. William Forbes, general manager of the London, Brighton, and South Coast Railway, was added to the committee within a few days. Guy Calthrop succeeded Sir Robert Turnbull as general manager of the London and North Western Railway on October 5, 1914, and took his place on the committee. Henry W. Thornton of the Great Eastern Railway, an American, joined the committee on behalf of his road. John A. F. Aspinall, general manager of the Lancashire and Yorkshire Railway, was in Germany at the time of his appointment and was held a prisoner of war from August 17 to September 21, 1914. During this period his assistant, Arthur Watson, served in his stead, and was later made a permanent member of the committee along with his chief. As to the nominal chairman, John Burns was president of the Board of Trade at the outbreak of the war, and became automatically chairman of the committee, ex officio. His resignation from the cabinet, a few days later, was followed by the appointment of Walter Runciman, who thus became nominal chairman of the committee. He was succeeded early in 1917 by Sir Albert H. Stanley, managing director of the Underground Electric Railways of London. Herbert A. Walker of the London and South Western Railway has served as acting and active chairman from the beginning down to the present time.¹

Thus the working makeup of the Committee, after the several changes outlined above, is the following:

Official chairman	Sir Albert H. Stanley, ex officio
Acting chairman	Sir H. A. Walker, London and South Western Railway
Donald A. Matheson	Caledonian Railway
Sir Sam Fay	Great Central Railway

¹ Messrs. Walker, Forbes, and F. H. Dent have been knighted since the beginning of the war.

Henry W. Thornton	Great Eastern Railway
C. H. Dent	Great Northern Railway
Frank Potter	Great Western Railway
John A. F. Aspinall	Lancashire and Yorkshire Railway
Arthur Watson	Superintendent, Lancashire and Yorkshire Railway
Guy Calthrop	London and North Western Rail- way
Sir William Forbes	London, Brighton and South Coast Railway
Sir Guy Granet	Midland Railway
Sir A. Kaye Butterworth	North Eastern Railway
Sir F. H. Dent	South Eastern and Chatham Rail- way

With the exception of Superintendent Watson of the Lancashire and Yorkshire Railway the active committee is composed wholly of railway general managers, who, in addition to their work on the committee, are responsible for the management and operation of their respective railways.

That the Railway Executive Committee is a representative body may be judged from the fact that the roads directly represented on the committee operate more than 15,000 miles, or about three-quarters of the entire steam railway mileage of Great Britain. The committee has general control, of course, over the operations of all British roads whether represented by membership on the committee or not. The following table gives the mileage operated by British railways in the aggregate, and by the roads represented on the Railway Executive Committee, on December 31, 1915, the latest date for which returns are available from the English Railway Year Book.

	Miles operated
Great Britain (about).....	20,300
Caledonian	1,118
Great Central	780
Great Eastern	1,191
Great Northern	888
Great Western	3,029
Lancashire and Yorkshire.....	601
London and North Western.....	2,069
London and South Western.....	985
London, Brighton and South Coast.....	457
Midland	1,650
North Eastern	1,755
South Eastern and Chatham.....	637
Total, twelve railways.....	15,160

It should be borne in mind that the organization of a central committee of railway officials with broad powers during the period of the war did not directly affect the internal composition of each railway's personnel. Each member of the Railway Executive Committee continued to act as general manager of his own line, and other railway officials were retained as far as possible, subject to such changes as are always taking place by reason of death, resignation, or otherwise, and to the additional changes brought about by the war. The organization of the general personnel of each railway was also retained, and remained as nearly intact as the inroads of war's many demands and changes would permit. Similarly, the routine of operation continued much as before, and such questions as wage adjustments, changes in working conditions, and the like, were usually taken up directly with the responsible officials of each road.

To make this fact clear from the outset, the railway companies quite generally issued statements to their employees and the public, of which the following is a typical example:

The taking over by the government of the control of this railway is for the purpose of facilitating the movement of

troops. It must be clearly understood that the terms of employment of the staff will remain unaltered and instructions to the men will be issued through the same channels as heretofore.¹

The *modus operandi* of the railways under war conditions may then be described as follows: Government traffic moved at the request of government, army, or naval officials, either general or local; detailed movements were in charge of the particular railway affected for the moment; the task of the Railway Executive Committee was to formulate general principles, and to co-ordinate the work of the several railway organizations into an efficient whole.

The third question raised at the outset of this chapter relates to the question of the financial agreement between the government and the railways. This agreement was provided for in the act of 1871 already cited, in the following words:

There shall be paid to any person or body of persons whose railroad or plant may be taken possession of, . . . such full compensation for any loss or injury they may have sustained . . . under this section as may be agreed upon between the said secretary of state and the said person or body of persons, or, in case of difference, may be settled by arbitration.

The act further provided that all contracts and engagements in force when a road is taken over shall be enforceable by or against the government during the life of such contracts or engagements, or as long as the government control over the railways shall be in effect.

In other words, the act not only gave the government wide powers to take over the railways in time of emergency, but prescribed in general terms the nature of the agreement under which railways so commandeered should be operated, namely, that the government should make "full compensation for any loss or

¹ Notice posted by the general manager of the South Eastern and Chatham on August 4, 1914.

injury." If the nature and extent of this compensation could not be agreed upon between the government and the railways, the points of difference were to be submitted to arbitration.

The requirement thus laid upon the British government by law was met in 1914 by means of a mutual agreement between the government and the railways, the principal features of which were as follows:

1. It was agreed by the railways that their organization should be placed without reserve at the disposal of the military authorities, for the transportation of troops, guns and munitions, military equipment and supplies, when, where, and under whatever conditions needed. For purposes of military transportation any railway or group of railways would virtually be commandeered for exclusive military service whenever the occasion demanded, all other traffic being sidetracked or restricted until the exigency had passed.

2. It was mutually agreed that no money would pass from the government treasury into that of any railway for any specific movement of troops or supplies.

3. The government treasury agreed to pay to each railway, at certain periodic intervals,¹ such sums of money as would bring its net income for the period to the level of the last corresponding period before the outbreak of the war. In other words, the government guaranteed the normal net income of each road, no less and no more. If a railway should suffer a deficit, *i. e.*, if the money received by it from the general public for the transportation of commercial goods and non-military passengers should prove insufficient to meet its expenses of operation, the government agreed not only to pay over such amount of money as would make up the deficit, but also to add enough to its payment to place the road in the same relative condition (as regards net income) as before the war. Conversely, if any railway should be so favorably situated (as for example, a road originating a tremendous amount of traffic) as to earn more than its

¹ Settlements are made monthly, but are verified and adjusted at the close of each fiscal year by a careful audit of railway accounts. This audit is made by chartered accountants in the employ of the government.

normal net income, it would be required to turn the excess into the treasury.

4. It was agreed that the normal net income for each road would be considered as the net income actually earned during the calendar year ended December 31, 1913, which was the last full year under peace conditions. The year 1913, then, was to be considered a typical year of railway operation under normal peace conditions, and its returns of revenues and expenses were to be used as the yardstick against which to measure the abnormal returns of the war years. The word "abnormal" is here used to denote not the idea of abnormality in size or amount, but merely the idea of being completely out of line with ordinary conditions and experience. However, there was at first one important qualification.¹ It was mutually agreed that if the net income of any railway for the first seven months of the calendar year 1914 (January to July, inclusive) showed increases or decreases as compared with the net income of the corresponding seven months of 1913, the payments of the government to that railway for the last five months of the year (August to December, 1914), would be such as to bring the net income of those months relatively as much above or below the net income of the corresponding five months of 1913 as the normal seven months' net income of 1914 was above or below the net income of 1913. This qualification was discarded after January 1, 1915, and 1913 became in fact the yardstick, or test year.² By "net income" is meant total revenues from railway and subsidiary transportation operations, less expenses of operation and taxes but before the payment of interest, fixed charges, and dividends.

It was further understood that the financial agreement would be maintained, subject only to voluntary mutual modifications, so long as the government continued to avail itself of the emergency provision of the Regulation of the Forces Act of 1871. Although the foregoing paragraphs have referred to money pass-

¹ See page 86.

² This corresponds roughly to "railway operating income," Item No. 21, in the Interstate Commerce Commission's monthly report form for railway revenues and expenses.

ing from the railways to the government treasury, or vice versa, yet the actual transfer of moneys was usually carried on through the Railway Executive Committee, which acted as a clearing house between the roads.

The financial provisions of the agreement just described were made the subject of official announcement, first, in a brief statement by the president of the Board of Trade to Parliament on August 27, 1914, and second by the Board of Trade itself in a formal announcement dated September 15, 1914.

President Walter Runciman of the Board of Trade said:

His Majesty's government have assumed the control of the railways of Great Britain. . . . The individual companies retain the management of their lines subject to restrictions issued by or through the executive committee. . . . No present payments are being made for services rendered to the government.

The announcement of the Board of Trade read, in part, as follows:

Subject to the undermentioned condition, the compensation to be paid them (the owners of the railways) shall be the sum by which the aggregate net receipts of their railways for the period during which the government are in possession fall short of the aggregate net receipts for the corresponding period of 1913. If, however, the net receipts of the companies for the first half of 1914 were less than the net receipts for the first half of 1913, the sum payable is to be reduced in the same proportion.

This sum, together with the net receipts of the railway companies taken over, is to be distributed in proportion to the net receipts of each company during the period with which comparison is made.

The compensation to be paid under this arrangement will cover all special services such as those in connection with military and naval transport, rendered to the government by the railways concerned, and it will, therefore, be unnecessary to make any payments in respect to such transport on the railways taken over.

Under the provision that the net income of 1914 should be regarded as less than that of 1913 in the same ratio by which the normal net income of the first seven months of 1914 fell below that of the corresponding period of 1913, it was estimated that the aggregate net income which the government guaranteed the railways for the last five months of 1914 would average from two and one-half to three per cent lower than it had been during the same period of 1913.¹ This percentage adjustment varied from road to road, being higher or lower in accordance with the particular situation of the road, but the mean or general average approximated something more than a two and one-half per cent decrease. This fact led the London *Statist* to denominate the agreement between the government and the railways one "under which the railways were taken over by the state during the war on a rental of the net earnings of the year of 1913, less a percentage allowance of about two and one-half per cent."

The war was hardly under way, however, before factors came into play to modify the agreement. The better organized groups of railway employes began with 1915 to make demands for higher rates of pay. The trend of railway wages and the nature and amount of the war bonuses granted during 1915, 1916, and 1917 are discussed in detail in the next chapter. The burden of the several war bonuses was shouldered by the government, except that at the time the first bonus of about two and a half shillings a week was granted² the roads agreed to carry one-quarter of that part of it paid to employes covered by the Railway Conciliation Scheme, in lieu of the two and one-half per cent reduction in net income described above. The reduction provision dropped out of consideration permanently, effective January 1, 1915. Later war bonuses were assumed by the government treasury, as would naturally be expected from the nature of the financial agreement whereby any increase in railway expendi-

¹ The first six months of 1914 showed some decrease in gross revenues as compared with the corresponding period of 1913, while the month of July took a sharp downward turn. Returns of net income for the seven months, including July, are not available.

² See page 100.

tures not accompanied by a corresponding increase in revenues would automatically be met by the government.

Another modification in the financial agreement related to fixed charges on new capital invested in railway property during the war period. Fixed charges are paid out of net income. It is clear that a railway that found itself forced by military exigencies or other traffic conditions during the war to increase its track mileage, its equipment, or other facilities, thereby increasing its capital and its capital charges, would be placed at a disadvantage in comparison with roads not so situated. The injustice of such a possibility was recognized by the government after a time, and early in 1917 the financial agreement was so modified as to provide a four per cent interest allowance by the government on all capital invested in new railway property since August 4, 1914. The allowance was added to the payments made by the government treasury to the several railways. The capital must have been invested on lines or branches, terminals, equipment, or other new facilities put into use since January 1, 1913. That is, the intention was to allow the interest charges not for ordinary improvements and betterments of road or equipment in existence prior to 1913, but only to take care of wholly new additions to railway facilities, such as new extensions of line, new stations or other buildings, and new additions to the rolling stock.

British railways have relatively few bonds or notes outstanding, and their financial problems are, therefore, quite different from those of American roads. Of the total railway capital of the United Kingdom, more than 99 per cent is in the form of ordinary and preferred stocks and debenture stock, the latter being equivalent to the American income bond without date of maturity. Less than one per cent consists of loans. The British railways have had virtually no need to meet the problem of refunding outstanding securities since the war began.

Still another modification of the financial agreement, which was more an interpretation of the terms of the agreement than a change in its underlying principles, dealt with maintenance

charges. British railways found it difficult under the war conditions of scanty labor and heavy traffic to keep up their normal maintenance work. Yet any maintenance work deferred to a future period was clearly chargeable to the expense accounts of the years wherein the wear and tear of the service made the work necessary. To allow for this the government provided, early in 1917, that reasonable charges for maintenance of road and equipment could be carried in the operating expense accounts, and if deferred should be credited to reserves which could later be drawn against for the deferred maintenance work. The government agreed to regard the maintenance charges of 1913, plus a twelve and one-half per cent addition for the wear and tear of war traffic, as a reasonable charge for each year of war control. For each road the difference between this "reasonable" charge of $112\frac{1}{2}$ per cent of its 1913 experience and the amount actually expended by it in each war year represents the deferred maintenance allowed by the government.

A third modification dealt with the matter of compensation for stores (*i. e.*, materials and supplies) in the hands of the roads at the time they passed under government control. Inasmuch as prices have been rising during the war, it would be unreasonable to require the roads to replenish their stocks of materials, at the end of the war, at higher prices than they paid for the stocks they turned over to the government. Under an arrangement between the roads and the government, the railway companies were assured of a stock of materials at the close of the period of government control equal to that on hand at the beginning of the period, or its equivalent in cash.

We have seen that the law of 1871, under which the war operation of the British railways has been conducted, authorized the government to put the scheme into effect for not longer than one week at a time. This provision has been followed, the arrangement being renewed each week, as will undoubtedly continue to be done until the close of the war.

This completes the general outline of the scheme under which the British railways have been operating since August 5, 1914. The scheme was expanded on January 1, 1917, to take in the

railways of Ireland. The original plan included only the steam railways of Great Britain, barring only the half-dozen subway and other city railways of London, but did not touch the Irish systems. These systems operated under their own managements until late in 1916, when the demands of their enginemen and firemen for war bonuses as great as those then under consideration for British railway employes became acute. The roads had already granted certain bonuses, beginning in February, 1915, but declared themselves unable to compete with the government treasury, and after a fruitless conference on December 16, 1916, between representatives of the government, the Irish railway managers, and the enginemen and firemen, the government decided to cut the Gordian knot and bring the railways of Ireland into the war scheme. This was done by means of an order in council, and on January 1, 1917, the Irish railways passed under government control. The arrangement for Ireland was virtually the same as that for Great Britain, except that a separate Railway Executive Committee was created for Ireland. All financial responsibility was assumed by the government, which agreed to maintain the net income of the Irish roads at their normal level.

The operated mileage of the railways of Ireland is about 3,500 miles. Some 2,500 miles of line are directly represented on the Irish Railway Executive Committee, while the government Under Secretary for Ireland is nominal chairman. The Irish Railway Clearing House also has a representative on the committee, which is constituted as follows:

Official Chairman	Sir William Byrne, Under Secretary for Ireland
Acting Chairman	E. A. Neale, Great Southern and Western Railway
Joseph Ingram	Irish Railway Clearing House, Secretary
James Coghlan	Dublin and South Eastern Railway
John Bagwell	Great Northern Railway of Ireland
M. F. Keogh	Midland Great Western Railway
J. Cowie	Northern Counties Committee (of the Midland Railway)

CHAPTER II

Labor and Wages

England's first plan for the raising of troops was by voluntary enlistment, and calls were made for all able-bodied men of military age to join the colors. The record of British railway employes in this respect was most patriotic. They enlisted from the ranks of every railway and from over the whole of the United Kingdom, until at the close of the year 1916 it was estimated that about 150,000 railway employes were with the colors.¹ When it is considered that this number represents nearly one-quarter of the normal force of railway employes in the United Kingdom, and probably one-half the male employes of military age, the enlistment record stands out as a notable one. In addition, auxiliary forces of British railway men were sent to the military zone in France to assist in the construction and operation of much needed railways, while still other employes were transferred to the munitions department of the government as skilled workers in the munitions plants, or to other branches of industry calling for skilled labor for war purposes.

Indeed the record, even from the beginning, proved almost too noteworthy, for it soon developed that the railways were playing the role of Peter robbed to pay Paul, and that they were being denuded of trained labor forces badly needed to carry on vital railway operations at home. It was not long after the outbreak of the war, therefore, that the War Office was cooperating with the railways in the way of placing restrictions on their employes. As early as September, 1914, the railways notified their employes that the War Office would thereafter accept no

¹ The English Railway Year Book for 1917 gives a list of railways and the number of enlisted employes of each. Down to the end of 1916 the total number of these enlistments was 133,077, which represented 21.3 per cent of the number of employes on the payroll of these same companies at the beginning of hostilities. British railway employes in normal times number about 650,000.

railway man "unless he presents a written statement from the railway company who employs him to the effect that he has approached the head of his department and has obtained the necessary permission to enlist."

As a corollary, it was emphasized both by the railways and the government that the railway employe could serve his country as well at his post as in the field. The railways quite generally notified their employes that theirs was a vital war service.¹ King George issued a message to all workers, pointing out that they were "assisting in the prosecution of the war equally with their comrades serving by land and sea." Similarly, Earl Kitchener stated that railway men who were "maintaining the railway services of the country (were) doing their duty for their King and country equally with those who joined the army for service in the field." Lord Rosebery, formerly Prime Minister, speaking at Edinburgh on December 18, 1914, said in the most emphatic manner that railway men were "as truly serving their King and their country as any man in the trenches." In the course of an address at Newcastle, April 20, 1915, Prime Minister Asquith extolled the work of the miner, the shipbuilder, the railway man, and all others who were contributing to the efficiency of the army. "I repeat," said he, "this is the nation's war."

Students of general war conditions in Great Britain know that the early enlistments tended to sap a number of important industries, such for example as the Welsh coal mining industry. In some instances the government was forced to recall soldiers

¹ A typical notice of this kind was that of the Great Eastern Railway to its employes, which read as follows:

"It is essential for the welfare of the nation that the railways should be maintained in an efficient manner, and be prepared to meet any military demands which may be placed upon them. This can not be done if the staff is seriously depleted, and in order to guard against such a contingency in view of the large number of men who have already left, it is requested that in future anyone in the service of the company wishing to enlist will first ascertain from his departmental officer whether he can be spared from his railway duties.

The directors and officers of the company desire to express their best wishes to those of the company's employes who have already so nobly responded to the call of their country. At the same time those whom circumstances force to remain in their present position should be regarded as performing a most important service to the nation."

from the French front and put them at their old work; in the case of railway employes, of course, men who returned in this way were set again to render transportation service. In this clumsy fashion a readjustment of available industrial and military forces was effected such as would not have been necessary had not foresight and common sense subordinated themselves to the seeming call of patriotic duty.

It may be noted that the British railways were sentimentally very proud of the enlistment records of their men, and did what they could to express their pride. They maintained lists of employes who had joined the colors, as well as rolls of honor of those who had fallen in battle or died of wounds, many of these honor lists and rolls being posted in stations or other public places; at least one road, the North Eastern, organized a special battalion of 1,100 employes. The railways agreed to keep enlisted men on their rolls as on leave, and to grant them the same positions or others of equal rank if they returned without disability. They also made generous allowances to them, which will be discussed later in this chapter.

The enlistments of British railway employes, even with the readjustments just described, were sufficient to force a considerable change in the composition of the employed force. This was brought about principally in three ways. In the first place, the government by a system of classification graded men of military age into specific groups: the military fit, those eligible for first class service in the trenches; those slightly less fit, men eligible for second line, reserve, or behind the line duty, and so on. Now by classifying railway employes in this way, it was frequently possible to substitute lower grade men for those of higher grade, thereby releasing the latter for military service. The vacancies in railway personnel brought about in this process were filled so far as possible from raw material from outside the railway field. It was often the case that men of the military service grades were skilled men whose places could not easily be filled from outside the ranks of the railway employes themselves;

the lower physical grades of men were often doing less skilled work, and their places could more easily be filled from outside. In this way, by readjustments within the railway force, it became possible to release many men for active war service whose places could not otherwise have been filled from outside the railways, and to fill their places with men relatively less eligible for military duty.

In the second place, the government endeavored in every possible way to enable the railways to suspend work and restrict service not absolutely necessary, and so to coordinate the work of the railways that they could utilize one another's facilities or labor and thereby avoid duplicating work. These economies and restrictions are discussed in the following chapter; they consisted in the reduction of service, economy of operation, abolition of accounting and statistical methods, and in many similar modes of cutting down labor and time.

In the third place, much of the simpler and less skilled sort of railway work was turned over to women and girls, whose employment released a corresponding number of male employees for military duty. There had been employment of women on the British railways for some time, but only in a limited way. However, the national necessity overhanging England was so great that in the end every personal or class consideration was subordinated to it, and a large number of women and girls were taken into railway service, as they were into many other industries of England. At last accounts, the number of women employees of British railways was considerably over 50,000 and may even have reached 100,000.

Women have been utilized largely as general clerks, telegraphers, booking clerks (*i. e.*, ticket agents), checkers, engine and carriage cleaners, ticket collectors, examiners and sorters, waitresses and dining car attendants, guards and porters, and in many minor capacities. They have also been employed to some extent as machinists in railway shops. One of the first problems that arose with regard to their employment in these capacities was in connection with the railway trade unions. It should be borne in

mind that there are three principal unions that largely control the relations of English railway men and their employers. These are the Associated Society of Locomotive Engineers and Firemen, the National Union of Railwaymen, and the Railway Clerks' Association.¹ These are the principal bodies, although many railway employes are members of the various national craft or shop unions. The railway unions for the most part acquiesced in the employment of women, but attempted to secure such restrictions on the employment of women as would retain the reins of labor control in their own hands. The National Union of Railwaymen even went so far as to accept women employes as members, although they were accepted on a temporary basis. The general secretary's report (June 18, 1917,) stated that "whatever the future holds with regard to the employment of women, it is very essential that we realize they are part of the industrial machine at present and that their place is inside the union, not only for their own interests but those of the men whose places they are temporarily taking." The Railway Clerks' Association had accepted women as members before the war, so that little or no change was required in their form of organization to enlarge their female membership. The Associated Society of Locomotive Engineers and Firemen has never received women members, for women are not employed as engineers or firemen.

Negotiations were carried on between the railway unions and the railways with regard to the rates of pay and hours of labor of the women employes, and particularly with regard to the relation of woman labor to the whole scheme of railway employment.

¹ The National Union of Railwaymen is the leading union of British railway employes. It includes men of all grades of work, but especially trainmen, maintenance employes, hostlers, porters and signal men. Its membership in December, 1916, was stated as 340,000. The Associated Society of Locomotive Engineers and Firemen includes only enginemen, firemen and hostlers. Its membership is 36,000 or less than one-half of the classes mentioned. The Railway Clerks' Association includes agents, stationmasters, and clerks. Its membership in 1917 is put at 52,000, a majority of the clerical workers on the railways.

The unions insisted that the railways should recognize the employment of women strictly as an emergency provision.¹ In general, the women were allowed the minimum pay of their particular grade of work, which was less than most of the men received for the same kind of work; the assigned reason in some instances being that they worked shorter hours, or where they worked equal hours that their work was less efficient than that performed by men. The chief objections urged by trade unionists to woman labor, as an established industrial factor in time of peace, have been set forth as follows: (1) Woman labor will lower piece rates, since women are willing to work at a lower rate than men; (2) will compete with and drive out man labor, especially where new automatic machinery has been introduced as a labor saving device since the war broke out; (3) will lead to conditions that are physically and morally objectionable, such as injuries to health and evils due to mingling of the sexes.

Enactment of the Military Service bill in January, 1916, brought the element of universal liability to military service into the railway labor problem. Railway employees were not, under the enforcement of the act, treated as a special class, although considerable discretion was placed in the hands of railway managers as to the degree to which any particular employee was indispensable to the railway service. The general instructions under which these discretionary powers were to be utilized appear

¹ For example, as the result of a conference between a committee of the general managers and the National Union of Railwaymen, held in July, 1915, the committee wrote the Union as follows: "I am desired to inform you that the general managers have reviewed the request made by your union in respect of the position and pay of women, and they agree that the memorandum referred to be amended as under:

"An assurance was asked for and given that the employment of women in capacities in which they had not formerly been employed was an emergency provision arising out of circumstances created by the war and would not prejudice in any way any undertaking given by the companies as to the reemployment of men who had joined the colors on the conclusion of the war.

"It was agreed that the employment of women during the war in capacities in which they had not been previously employed is an emergency provision, arising out of the war, and is without prejudice to the general question of the employment of women.

"The pay of women employed in grades in which they were not employed prior to August, 1914, for the duration of the war, shall be the minimum pay of the grade."

below. The significant phrase is the first, which calls only for such men as "can be spared":

(1) When it is found at any place that a man of any particular grade or position can be spared, the youngest unmarried man under the age of 31 and fit for foreign service should go.

(2) If there is no single man under the age of 31 available, the married man under the age of 31 with the fewest children (under 14 years of age) should be selected. In cases where the number of children in family is equal, the youngest man should be released.

(3) If after all single and married men under the age of 31 and fit for foreign service, and who can be released, have been exhausted, and it is still possible to release men from any grade or position, the youngest single man between the ages of 31 and 41 and fit for foreign service should be released, and afterwards the married man between the ages of 31 and 41 with the fewest children under 14 years of age.

For several years prior to the war, railway wages in England were on the upward trend. In 1911, as the result of a threatened general strike of railway employes, adjustments and advances were forced on the railways. As a corollary to these advances was the promise of the government to enact a law permitting railways to raise rates for the purpose of raising sufficient revenue to meet these wage advances. The law was passed early in 1913 after considerable debate, and in July of that year the railways attempted to make effective certain freight rate increases, averaging about four per cent, so as to counterbalance the wage increases of 1911. These rate advances were held up by the government, and did not become generally effective until early in 1914, or only a few months before the outbreak of the war.

During this period of freight rate adjustment, from 1911 to 1914, no general wage advance had taken place on the English railways, although the railway unions were consistently working for higher rates of compensation. Under the so called Rail-

way Conciliation Scheme¹ that became effective early in 1912, the unions could give a year's notice of their desire to abolish the scheme, on any date after November 6, 1913. The unions very generally took advantage of their privilege on that date, notifying the railways that on November 30, 1914, they would exercise their right to repudiate the Conciliation Scheme and would expect thorough readjustments in the wage scale. Throughout the spring and early summer of 1914 the unions were engaged in conferences with each other and in negotiations with the railway managers, but the war broke out before definite agreements on wage readjustments were reached. On October 1, 1914, the unions agreed with the railways that the existing Conciliation Scheme should continue in effect until one or both sides gave six weeks' notice of abrogation. This was the so called Industrial Truce.² In 1915 a new scheme was proposed by mutual agreement of the railways and the union officials, but was rejected at a general meeting of the National Union of Railwaymen in the spring of 1916. Negotiations were again

¹ This Conciliation Scheme was the result of mutual agreement between the railway unions and the companies, and provided for the creation of Conciliation Boards on each railway, on which both the company and the employees should have representation. The scheme was originally put into operation in 1907, but was modified as a result of the general railway strike of August, 1911. All settlements by the Conciliation Boards were binding during the period of operation of the scheme.

² The exact language of this truce was as follows:

"That notwithstanding the notice of determination which expires on 30 November, 1914, the scheme of conciliation settled at the Board of Trade conference on 11 December, 1911, shall remain in force and that the men's sides of the boards on each of the several railways as at present constituted shall continue to act, provided that either the railway companies, the National Union of Railwaymen, or the Associated Society of Locomotive Engineers and Firemen may give six weeks notice to determine the agreement, and thereupon the parties hereto shall agree as to the arrangements to be adopted for the future.

"It was further agreed that all existing contracts and conditions of service shall remain in operation, and that no new agreements shall be made by the companies either with deputations or Conciliation Boards during this suspensory period."

The provisions of this truce were restated in subsequent agreements between the unions and the companies. Thus the agreement of October 16, 1915, carried the following as its final provision: "(6) It is agreed that the truce entered into at the meeting between the parties hereto on October 1, 1914, shall continue in force until the agreement now made is determined." The same provision appeared in the agreements of September, 1916, and April, 1917.

resumed in 1917, but without definite result, so far as information is available at the present writing.

Inasmuch as some three years had passed since a general revision of railway wages, and negotiations for a revision were under way at the time war broke out, the stage was set for wage demands on the part of the railway employes soon after the beginning of hostilities. These demands were made insistent by reason of the steadily rising cost of living since 1911 and the especially sharp upturn in prices after August, 1914.

Before turning to a discussion of wages of British railway employes who remained at their posts during the war, we may glance briefly at the financial situation of the men who enlisted. The railways quite generally made allowances to men with dependents, in addition to their regular army pay and separation allowances, designed to make it reasonably certain that at least the equivalent of four-fifths of a man's normal earnings reached his family during his absence. What the War Office turned over to the private's family each week varied according to the size of the family; for a wife only it amounted at first to 11 s. 1 d., with 1 s. 9 d. additional for each dependent child up to three, and 1 s. 2 d. for each child after the third. About one-third of the amount of these payments comprised allocations set aside by the government from the soldier's pay, while the remaining two-thirds represented the government separation allowance. On October 1, 1914, the scale was increased to 12 s. 6 d. weekly for the wife, 2 s. 6 d. per child additional up to three, and 2 s. for each child after the third. On March 1, 1915, the weekly allowance for children was again increased to 5 s. for the first child, 2 s. 6 d. for the second child, and 2 s. for each child after the second. Motherless children were granted each 5 s. per week. To these amounts the railways added whatever was necessary to bring the total family allowance to not less than four-fifths of the man's normal income. In the case of the lower paid men, it sometimes ran even above four-fifths. Certain privileges and perquisites were usually retained by men who joined the colors, such as continued occupation of company

houses, the right to purchase coal at cheap rates, continuance of membership in pension funds, etc.¹ Again, some of the unions, such as the National Union of Railwaymen, carried enlisted men on their rolls without calling upon them to keep up their dues or other periodical payments.

One of the first problems to confront the railways was that of wage adjustments for employees who continued in railway service. These wage adjustments were at first made under the name of "war bonuses," serving temporarily to increase wages without making the settlement permanent or closing the door to post-war negotiations. That is, the "war bonuses" were simply temporary expedients, negotiated under emergency conditions and designed to leave the whole question of normal wage levels to be reopened and discussed *de novo* at the close of hostilities. Beginning in April, 1917, the war bonus principle gradually gave way before the insistent demand of the unions that the increases be regarded as *wages* rather than bonuses.²

The extent to which the railways have participated in the burden of these war bonuses and adjustments is very slight. They assumed one-quarter of the first bonus of three and two shillings per week to employees under the Conciliation Scheme, in consideration of the abolition of the proviso as to the *pro rata*

¹ While these payments and privileges were granted by the individual railways to their employees, they were general enough to warrant official notices from the Railway Executive Committee as follows:

August 12, 1914. "The railway companies have arranged to keep open positions for Reservists and Territorials who have joined the colors. The companies will also make allowance to the families during the time the men are absent from their homes, and will, when necessary, pay the subscription to the companies' superannuation and provident funds."

August 27, 1914. "We are authorized to state with regard to Army Reservists in railway service who have joined the colors, the railway companies have arranged to supplement the army pay and allowances in such a manner that the families will be maintained in circumstances which should avoid hardship during the absence of the bread winner of the family. Occupants of the companies' houses will not be disturbed. This also applies to the families of Naval Reservists and Volunteers."

"In addition, on the return of the men from active service, positions will be found for them on the railways equal to those they formerly occupied. If through any oversight any family finds itself in want of assistance, the attention of the railway company concerned should be at once called to the case."

² See page 103.

reduction of net income by about two and one-half per cent; all other wage advances have been guaranteed by the government.

The first war bonus was arranged between the railways and the two principal unions (National Union of Railwaymen and the Associated Society of Locomotive Engineers and Firemen) on February 13, 1915, and applied to such employes of the English railways as were then covered by the Railway Conciliation Scheme.¹ The unions had demanded an all round increase of 5 s. per week in the summer of 1914, before war was dreamed of, and this demand was repeated in January, 1915. After some negotiation, the railways granted their men a war bonus, amounting to 3 s. a week to men whose standard wage rate was under 30 s. per week, and 2 s. to those whose rate was 30 s. or over. The average of this bonus was about 2 s. 6 d., or one-half what was demanded by the unions. In June, 1915, a special war bonus amounting to 1 s. 6 d. a week was granted to employes under 18 years of age engaged in train operation. These two bonuses were enlarged in October, 1915, by being increased to 5 s. in the case of adults and 2 s. 6 d. for boys under 18 as the result of an agreement between the unions and the railways.

At the time these October bonuses were granted, it was agreed between the National Union of Railwaymen and Associated Society of Locomotive Enginemen and Firemen on the one hand, and the railway companies on the other hand, that the October scale should remain in force as long as the government was in control of the railways, subject to termination thereafter on a month's notice from either side. During this period the two unions bound themselves not to make any additional demands, nor to authorize or countenance any efforts in that direction

¹ While the roads seem quite generally to have applied the bonus to all their employes, their agreement to assume one-quarter of it applied only to payments to men covered by the Conciliation Scheme, who comprise somewhat more than one-half of all British railway employes. The principal classes not comprised in the Conciliation Scheme are mechanics and artisans, clerks, laborers, inspectors, stationmasters, and miscellaneous workers. The Scotch railways agreed to virtually the same bonus a few days after the English roads.

on the part of their members, nor to support any strike undertaken to make such efforts effective.

In August, 1916, the unions broke this compact by demanding an additional bonus of 10 s. per week, but endeavored to avoid the appearance of violating their agreements in part by asking for it as a wage advance rather than a bonus, and in part by pleading the unexpected duration of the war.¹ While this demand was under discussion, a crisis was precipitated by the threat of a strike on the part of the South Wales District of the National Union of Railwaymen. The railways offered 3 s., which was refused, and after the Board of Trade had intervened, an agreement was finally reached by which the existing bonuses were doubled to 10 s. for men and 5 s. for boys. These increases took effect on September 16, 1916. Again in March, 1917, the unions demanded an additional 10 s., receiving in April 5 s. and 2 s. 6 d., respectively. This made the total war bonus to date 15 s. per week for men, and one-half that amount, or 7 s. 6 d. for boys. In addition, various bonuses had been granted to women and girls, beginning in September, 1916, with 3 s. weekly to women and one-half that amount to girls under 18 years; these bonuses were increased in April, 1917, to 5 s. 6 d. and 2 s. 9 d., respectively.

Among the shop workers similar increases were being made. The first war bonus was granted in February, 1915, and amounted to 3 s. per week. This was later increased to 4 s. for time workers, and 10 per cent for piece workers. In September, 1916, they received an additional 5 s. per week. At the beginning of 1917, a large part of them were in-

¹ The demand was couched in the following language: "That inasmuch as the government has taken no effective steps to control the price of the necessities of life, this committee, in uniformity with the instructions of the annual general meeting, decides to make an application to all the railway companies in the United Kingdom for an increase of 10 s. per week for the whole of our members on the following grounds: (1) that the duration of the war has extended beyond the period contemplated by the contracting parties to the present agreement; (2) that the cost of commodities has risen and is still rising in a higher proportion than is warranted by the present earnings of our members, which are insufficient in many cases to maintain decent conditions of life."

cluded under the terms of an agreement between the craft unions¹ on the one hand and the Engineering Employers' Federation on the other hand, whereby both sides agreed to allow the government Committee on Production to consider the problem of wage adjustments three times each year, in February, June and October, and to make such increases as might seem justified by conditions. The railways were affected by this agreement in so far as certain of their craft or shop workers were concerned. Under the agreement the Committee on Production in February, 1917, awarded 5 s. a week as an additional war bonus, and in June still another 3 s. to men over 18 and 1 s. 6 d. to boys under 18. This last award became effective August 1, 1917. These same increases were added to the weekly earnings of piece workers, premium workers, and others who worked on systems of payment according to results, and were made "as war advances, intended to assist in meeting the increased cost of living, and to be recognized as due to and dependent on the existence of abnormal conditions now prevailing in consequence of the war."²

Salaried employes were included in the war bonus scheme on July 1, 1916. Men receiving less than £200 per year were granted an annual war bonus of £13, or 5 s. per week, while those with salaries between £200 and £213 received such amount as would bring them up to £213. These bonuses were doubled in September, 1916.

Up to April, 1917, the war bonus principle was strictly observed, both in connection with increases to trainmen, to clerks, and to shopmen and other workers. The particular bearing of this fact on the railway wage situation was that being in the nature of special grants rather than added wages, the bonuses did not apply to overtime or Sunday work, payment for which was computed at the old rates.

¹ British railway employes belong to many so called craft or shop unions, whose membership is drawn from various industries. In 1915 thirty-two of these craft unions formed a Railway Shops Organization Committee. Among the crafts represented on this committee were toolmakers, machinists, electrical workers, brass workers, painters, and molders.

² *Railway Gazette* (London), July 27, 1917, p. 97.

Beginning with the April grants, however, the war bonus principle showed signs of crumbling. The negotiations leading up to these grants were conducted by the Railway Executive Committee acting as such rather than for the individual companies (as had formerly been the case), and the additional bonus of 5 s. was permitted to apply in computations for Sunday work as well as weekday duties. This was the opening wedge, which was driven home in August. At this time (August 8, 1917,) the war bonus of 15 s. per week was by agreement with the Railway Executive Committee converted to "war wages," the effect of the change being to bring all the increases since 1914 into the calculation of payments for overtime and Sunday work.

In spite of these various concessions, unrest continued among the various railway unions, which even threatened at times to break out into open industrial warfare. During the latter part of November, 1917, the National Union of Railwaymen had under consideration the formulation of a program, or series of demands, which laid down certain minimum provisions regarding hours, rates of pay, holidays, and the like, and called for equal representation, both national and local, of the National Union of Railwaymen upon the management bodies of all railways of the United Kingdom. These demands are still pending, but the month of November was notable for other reasons as well. In accordance with the agreement already described, the Committee on Production had in October taken up adjustments in the wages of the shop workers. While they were so engaged, the enginemen and firemen demanded additional wages, with the threat to strike unless the demands were granted. The Committee on Production handled their case, and in November granted them, as well as the shop workers, a total of 20 s. per week, which for most of the men was an increase of 5 s. The National Union of Railwaymen thereupon came to the Railway Executive Committee with a demand for 10 s. in addition to the 15 s. they were receiving as weekly war wages. The whole matter was adjusted on November 29 by granting 6 s., or 21 s. in all, and this grant was extended to the other classes, making a

general all round increase of 21 s., to all adult male workers. Boys under 18 were increased 3 s. per week, or from 7 s. 6 d. to 10 s. 6 d.; women 3 s., or from 5 s. 6 d. to 8 s. 6 d.; and girls under 18, 1 s. 6 d., or from 2 s. 9 d. to 4 s. 3 d.

Regarding bonuses to Irish railway men, the railways up to 1917 had granted 6 s. a week to the enginemen and 5 s. 9 d. to the firemen. The demand of these two classes in December, 1916, for an additional 10 s. brought on the change in the status of the Irish roads. The government thereupon gave them 7 s. per week in addition to what had already been granted. Later, the Irish Railway Executive Committee granted an all round war bonus of 5 s. to all employes of the Irish roads, which became effective on April 9, 1917.

All advances to railway craft or shop workers, like all advances to other classes of railway employes were, of course, taken care of under the government guarantee, with the sole exception of one-fourth of the war bonus of February, 1915, already noted. This exception applied only to workers comprised within the Railway Conciliation Scheme, and only to the first bonus of about 2 s. 6 d. per week. The *Railway News* estimated the railways' share of this bonus at about £555,000, or not far from \$2,700,000. Sir Albert Stanley, official chairman of the Railway Executive Committee, recently stated that railway war bonuses then aggregated about £25,000,000. The November advances just described have increased this sum to £33,000,000, or more than \$160,000,000, per annum. It is clear, therefore, that the government is guaranteeing the bulk of the wage increases of the railway employes of the United Kingdom since the war began.

CHAPTER III

Efficiency and Economy

Testing an organization by its physical results is one of the surest measures of efficiency. Judged according to this measure, the operation of the British railways under government control during the war has been a success. To this fact the testimony of many distinguished Britons has borne evidence.

The first great test was the hasty mobilization of the Expeditionary Force for passage to France in August, 1914. So sudden was the outbreak of hostilities, and so unprepared the British public, that every move was forced onto the railways at pressure speed. Troops came from different parts of the country,¹ were mobilized at various points, were transported to the port of embarkation (Southampton) and were there turned over, together with horses, wagons, field pieces and countless other equipment, to the shipping masters.

War broke on August 4. Ten days later the first British army, 120,000 strong, were in France with full equipment and supplies. Under the mobilization schedules prepared years before the war, trains were operated at fixed intervals and came into Southampton every 12 minutes for 16 hours of every day, or from dawn until dark. The regulations provided that if a train were over 12 minutes late, it should lose its turn on the schedule and should be sidetracked until the whole troop movement was completed. Not a single train lost its turn. In fact, most of the trains arrived at Southampton from 20 to 30 minutes ahead of schedule. This one movement of the first Expeditionary Force called for 1,500 trains.

Of the efficiency with which all this was done, the *Railway*

¹ At the outbreak of war the regular summer army manoeuvres were under way, and some of the troops were on their way to training grounds. In certain instances, the troop trains were actually halted en route, and turned back toward Southampton.

News (London) made the following comments on August 22, 1914:

It was a wonderful achievement of toil, done in the light of flares and arc lamps. Not a man or horse was injured. Not a wagon or field piece damaged. When medals are distributed the railway workers should certainly receive them. The automatic departure of the trains was truly marvelous; they worked to a time-table, and were run with greater regularity than is the ordinary traffic of an August bank holiday. A half battalion of infantry marched up, hoisted their machine guns and water cart aboard, climbed into the waiting carriages themselves, and twenty minutes later they were off. Little more time was expended upon a squadron of cavalry or a battery of artillery, although there were horses to box and guns to mount on trucks.

Official testimony to the same end may be found in the statement from the Official Press Bureau, under date of August 18, 1914, that "the embarkation, transportation, and disembarkation of men and stores were alike carried through with the greatest possible precision and without a single casualty."

Men high in the public life of England bore similar testimony. Prime Minister Asquith, in the course of a parliamentary debate in November, 1914, said:

No praise can be too high for the manner in which the railway companies of the country discharged the duty of transport in regard to the Expeditionary Force and the various matters in which they were engaged.

Speaking as Secretary of War before the House of Lords on August 5, 1914, Earl Kitchener declared that—

Mobilization took place without any hitch whatever. . . . The railway companies, in the all important matter of the transport facilities have more than justified the complete confidence reposed in them by the War Office, all grades of railway services having labored with untiring energy and patience.

Sir John French, then commander of the British forces in France, in his official dispatch of September 9, 1914, said:

The transport of the troops from England both by sea and by rail was effected in the best order and without a check. Each unit arrived at its destination in this country well within the scheduled time.

Quotations of this kind could be multiplied many times from speeches of members of Parliament and other publicists, and from writings of many observers and students of the railway situation.

Regarding the earliest efforts of the railways in the war, therefore, there was hardly any difference of opinion. Lack of labor, constant demands for the priority shipment of military goods, and the great reductions in passenger and ordinary freight services did work hardships on many branches of the traveling and shipping community as the war dragged along, and to that extent indicate a lowered ability of the railways to render direct service to the public. If, however, British railway efficiency be judged according to ability to transport troops and military supplies without confusion and on schedule, the roads would seem to deserve high rating. The volume of their traffic was greatly increased over that of normal times, and this traffic was handled by a labor force composed in part of relatively green hands, of women workers, and of boys and girls in their teens. It would probably be accurate to say that a larger amount of transportation was produced with a smaller and less skilled labor force, in itself a highly efficient record.

One test certainly should be applied to the British railways during the war, and that is the amount and character of their service to the government. To this test the railways measure up well. We have seen how fully the War Office depended on them in the first mobilization period, and how thoroughly they met the demand. Their military transportation work throughout the whole war has been of the same high order. They contributed thousands to the colors, many of whom served in France in the construction, reconstruction, or operation of war railways.

They loaned equipment to be shipped cross-channel, and contributed bridges and even rails and ties from out their own roadbeds. In fact whole branch lines were in some cases torn up and transported bodily to France. They loaned skilled men to munitions works and other branches of war industry. Skilled boiler makers from some of the railway shops were detailed to service in naval dockyards. Many of their docks and harbors, and half of their 200 and more steamers were turned over to the Admiralty and the War Office for transport or other services. Companies undertook car building and repairing in their own car shops for the Admiralty and the War Office, the result being that the building of new equipment for railway purposes was materially curtailed. Normal repair work was greater than usual, owing to the pressure of war traffic on the equipment; in addition, the roads were called upon to adapt much of their rolling stock to the unusual demands of war transportation, such as by the adaptation of freight cars to carry horses, cavalry, artillery equipment, and the like. Some roads supplied telephones and power, others handled naval repairs in their marine shops, while still others undertook various forms of work for the government, entirely separate from their transportation activities. Many of the large roads fitted up ambulance and hospital trains for service both in France and England, stretcher cars, hospital ships, rest rooms for soldiers and other conveniences of the kind; the larger part of this work was done in their own shops.

With all this the English people did not accept the inconveniences and discomforts of war transportation without some grumbling. They grumbled when their bank holiday and sea-shore excursions were restricted or abolished; they grumbled at higher passenger rates coupled with less frequent service; they grumbled at delays, at the anti-aircraft regulations requiring closed blinds in passenger trains at night, and darkening of lights at railway stations; they complained of other regulations involving discomfort to passengers, and protested against the dirt, the soot, and the lack of maintenance of the cars; in short, they

maintained the full privilege of democratic countries to accept nothing without a growl, although much of the growling was merely on the surface. One critic complained¹ that railway officials under their government guarantee of dividends were acting as if they were independent of the public and could "go as they please." Yet many of these conditions of which the public complained resulted from orders of the War Office or the Admiralty, and did not pertain to railway operation proper.

Closely related to operating efficiency are the economies and restrictions forced on the British railways by war conditions. War's outbreak found the British public inclined to take matters calmly and proceed with their normal activities. "Business as usual" was the cry, and at the start whatever interfered with their ordinary pursuits and enjoyments was bitterly opposed. Thus the war broke during the August holidays, when the exodus from large cities to seaside resorts was at its height. After a slight derangement of traffic during the first days of hostilities, the public were assured that there would be no further serious restriction to traffic, and that they could pursue their normal avocations. The steps by which this conclusion was reached may be traced in part by a series of announcements issued by the Railway Executive Committee direct, or through the Railway Clearing House. On August 5, 1914, announcement was made that on account of the war crisis regular freight service was likely to be considerably curtailed or interrupted, that traffic would be accepted only as the conditions warranted, and then with the distinct understanding that no responsibility would be assumed for delay, damage or loss due to such curtailment or interruption. Three days later, on August 8, a similar notice was issued respecting the passenger service. At the same time the public was informed that passenger tickets between any two points would be honored by any railway serving those two points. This last concession was withdrawn on August 24, when the Executive Committee announced that since mobilization was completed "the railway companies are in a position to resume the

¹ Jesse Quail, *Financial Review of Reviews*, March, 1917, pp. 20-21.

bulk of their ordinary service, and the necessity (for the previous order) therefore disappears." However, beginning with December, 1916, the privilege of inter-availability of season and traders' tickets was established, but under certain very definite restrictions and provisions to provide against abuse. In this way tickets of the kind named were made available over two or more alternative routes.

In fact, the early months of the war saw considerable effort in the railway industry, as in numerous other industries, to keep conditions at a normal level. This was true of their water service as well as their transportation service on land. The *Railway News* congratulated the roads on maintaining to so large a degree their regular schedules during August, 1914, except possibly in facilities for cheap travel. The *News* continued as follows:

There was also a steady movement in favor of the resumption of some of the curtailed facilities, . . . when the initial inevitable uncertainty and alarm settled down. Gradually practically normal conditions were restored.

But the pressure of war soon brought restrictions in its wake. In the first place, war traffic made such demands on the railways that normal freight and passenger traffic were of necessity restricted. In the second place, the enlistment of thousands of railway employees made necessary the cutting down of many railway functions and services. In the third place, a large part of the water service to Ireland, to various islands (such as the Isle of Wight), and across the Channel to France and Holland was curtailed or abolished, either because of the vicissitudes of water transportation or because the boats were turned over to the Admiralty. Many of these reductions, as well as countless others, were put into effect by the Railway Executive Committee, at the behest of the government, as a part of their war program. Facts are not at hand by which to trace these reductions and other measures in detail, but they consisted principally of reductions in the number of passenger trains; in the number of cars

per passenger train, especially first class, dining and sleeping cars; in the extent of meals served on trains and in railway restaurants; in the speed of passenger trains; in the number of suburban or commutation trains in the locality of large cities. Traffic on some of the branch lines was much reduced or given up entirely, while some way stations were closed wholly or in part. These measures were designed to save labor, coal and equipment, as well as to make way for the vital war and freight traffic.

While the British public did not receive these moves and measures without some protest, they were forced to accept them as war necessities. Taking the period of war as a whole, and ignoring much of the surface grumbling that cropped out during the first few months, they have suffered the annoyances of a restricted passenger and freight service with unusual fortitude. In the words of the London *Railway News* (July 7, 1917); "Inconveniences attending travel under war conditions have been accepted by the public in good spirit, it being now understood that only necessary journeys should be taken."

Many of these economies and restrictions were put into effect during 1915 and 1916, but they were intensified on January 1, 1917, by a new series of measures of the Railway Executive Committee designed to bring about an even greater reduction in passenger traffic.¹ Most notable was an increase of passenger fares designed to reduce travel, but there were other measures also, such as additional reductions in number and speed of trains, restrictions in baggage privileges, and the like. It is estimated that 250 passenger trains were withdrawn from service on January first, many of which were of the non-stop express class. These gave fast service between London and the large cities of England, such as Manchester and Liverpool, but they were ruthlessly removed from the schedules. The special train service

¹ See Appendix C, Section 1 (c), (d), and (e), for a statement of the powers under which the Board of Trade acted; also Appendix D, for definite orders as to fares and baggage, and for the official notice of the Railway Executive Committee putting various restrictive measures into operation.

usually furnished by the railways at such holiday periods as Easter, Christmas, and during the summer season, which had been much curtailed in 1915 and 1916, was virtually abolished in 1917.

Another set of economies related to accounts and statistics. The arrangement of the government with the railways was such that careful and detailed accounting, especially as between railways, was made unnecessary. The same was true of many statistical records. As early as August 18, 1914, the Railway Executive Committee did away with compilation and publication of weekly traffic statistics, remarking that even if published they "would be no real indication of the amount or value of the traffic." Similarly, weekly traffic returns on the Irish railways were suspended as soon as those roads came under government control. Something more than half the accounts and statistical statements required of the roads by the Board of Trade were suspended in 1914 and 1915, while the statistical returns were all suspended after January 1, 1916.¹

The simplification of inter-railway payments did away with much of the work of the Railway Clearing House, a joint organization of the roads at London through which they settled their claims against one another. The normal activities of that organization were largely suspended during the war, many of its

¹ The income account has been reduced to five items, as follows:

- 1 Receipts in respect to railway working, and of separate businesses carried on by the company, including estimated amount receivable under agreement with the government in respect of control of railways for the period.
- 2 Expenditure.
- 3 Net income.
- 4 Receipts from other sources (net).
- 5 Total net income.

Accounts withdrawn from the annual reports of the roads are principally the following:

- 10 Receipts and expenditure in respect of railway working (together with Abstracts A to J, inclusive).
- 11 Receipts and expenditure of omnibuses.
- 12 Receipts and expenditure of steamboats.
- 13 Receipts and expenditure of canals.
- 14 Receipts and expenditure of docks, harbors and wharves.
- 15 Receipts and expenditure of hotels, refreshment rooms, etc.
- 16 Receipts and expenditure of other separate businesses.
- 17 Electric power and light account.

clerks being released for such other forms of service as keeping records of the performance and interchange of equipment. Nearly a thousand of these clerks—about one-third of the total number—enlisted under the colors.

The returns of the roads to the Board of Trade being cut down, the summary reports prepared on the basis of these returns were also much reduced. In fact, instead of a blue book of some 150 pages, the Board of Trade in 1914 issued only a single sheet of the most general statistics.¹ No official summaries have yet been received in the United States covering the years 1915, 1916, or 1917. The periodical reports of the Board of Trade respecting railway accidents have also been curtailed, both as to number and as to detail and extent.

Individual railways not only reduced their reports in accordance with the requirements of the Board of Trade, but have even gone so far as to refrain from distributing reports to their stockholders except on request. Annual meetings are announced through newspaper advertisements, and not through advance copies of the reports mailed to each share and debenture holder, as was formerly the case. Any person familiar with the attitude of a British investor to the corporation in which he is interested will recognize the drastic nature of this measure. It is true that reports to stockholders give little information of value, but the British investor is jealous of his rights. These stockholders' reports for 1914 carried usually a note to the most

¹ This sheet contained the following items:

- Miles under operation.
- Authorized capital.
- Paid up capital.
- Engine mileage.
- Revenue receipts and expenditure (two items only).
- Net income.

The figures shown are for 1913 and 1914, but the similarity of some of the returns for the two years leads to the suspicion that the returns for 1914 may be estimated or adjusted. Such, for example, are the statistics of engine miles. The report carries this footnote:

"In consequence of the war, no further returns will be published for the year 1914 regarding the statistics of the railway companies of the United Kingdom."

important account, that covering income, explaining why it had been reduced to a skeleton. The following is an example:

It being considered desirable in the interests of all parties that the basis for assessing the compensation payable by the government under the act referred to should be determined at the commencement of the period of control, an arrangement was arrived at [here follows a brief description of the financial agreement between the government and the roads].

The circumstances thus brought about involve special variation, which has been approved by the Board of Trade, in the form of the Accounts and Statistical Returns for the year ended the 31st December, 1914, and the statements which are now presented are prepared accordingly.

So far as accounting relations between railways are concerned they were entirely abolished at the outset, for the government guarantee of each railway's net income has made it a matter of no importance whether the roads make a division of receipts or not. The road originating a shipment no longer turns over a proportional share of the freight receipts on that shipment to the connecting railway to which it delivers the shipment for transportation to final destination, but simply marks the parcel "Paid" and keeps the proceeds. Similarly, on a C. O. D. shipment the originating road merely stamps "To Pay" on the parcel and the terminal or final carrier collects the charge, without any attempt at division with the other road or roads participating in the movement.

Similarly, prepayment of charges has been required in many cases, especially in the case of fast freight forwarded by passenger train, while the amount of free baggage has been much restricted.¹ Detailed regulations have also been made effective as to containers for freight, as to mode of packing, as to weights of parcels, kind and addresses of labels, and the like.

Competition among the railways of course has ceased. Solicitors for the freight and passenger business of competing lines

¹ For details of this last restriction, see Appendix D.

have disappeared from railway payrolls. For the time, the separate companies have merged their identities and subordinated all their interests to the one compelling force—the drive for victory.

The Railway and Canal Commission also has reduced its regular work. In 1916, for example, it secured the consent of the interested parties to postpone the trial of many cases until after the war. Many of these cases dealt with rate adjustments. This action was due partly to considerations of economy, and partly to the fact that some members of the commission were called to perform other public duties in connection with the war.

Similarly, the work of Parliament in railway matters has been much reduced during the period of the war. Few applications have been made for permission to increase capital, and fewer applications still for charters to build new lines or extensions. Under the pressure of war conditions, the railways are too busy to send their legal representatives to Parliament on normal or peace activities, and Parliament in turn is too busy to listen to them. During the session of 1915, the total number of private railway bills introduced into Parliament was eleven, as compared with 37 in 1914; the total length of new lines proposed was 44 miles as compared with 113 miles in 1914; the amount of new capital for which authorization was requested was \$24,350,000, as compared with \$60,200,000 in 1914.

One additional war measure, which was as much an efficiency as an economy measure, related to the pooling of equipment. In February, 1915, President Runciman of the Board of Trade, who was then chairman ex officio of the Railway Executive Committee, informed Parliament that arrangements were under way to transfer freight cars from lines having a surplus to those suffering a shortage. He added: "It has also been arranged that wagons belonging to one company which have been worked onto the line of another may be loaded back locally in the home direction, instead of being returned empty."

Beginning January 1, 1916, three large roads (the Great Central, Great Eastern, and Great Northern) drew up a joint agree-

ment as to the pooling of ore cars on their lines. This was followed by a similar agreement in April, 1916, between five other roads (Great Western, Lancashire and Yorkshire, London and North Western, Midland, and North Eastern) and in May by three Scottish companies. These agreements evidently were successful in producing economies, for the Railway Executive Committee on January 1, 1917, instituted a general car pool, or rather twelve sectional car pools, scattered throughout the whole of Great Britain. With certain exceptions, such as company cars, coke cars, and special military traffic cars, open-top freight cars belonging to the railways were made available as common stock, to be utilized in any direction by any road. General and specific instructions to govern car movements are issued by an official known as the Rolling Stock Controller. All records and detailed arrangements in this connection were entrusted to the Railway Clearing House. In this way it was expected to obviate to a large degree the delays and difficulties attendant upon unnecessary car movements, and to increase the efficient transportation of goods. In addition, there has even been considerable interchange of locomotives between the railways, especially on through runs.

At the beginning of April, 1917, the Railway Executive Committee issued further orders fixing definite time limits within which shippers should load and unload cars—usually one day for loading and two days for unloading.¹

The private freight car nuisance had grown to an intolerable state before the war, but no railway had the backbone, or perhaps the power, to oppose it. The large coal operators and many other industrial companies owned some 600,000 cars² and insisted on receiving their cars back as soon as they made a shipment. The result was doubly bad in that it produced much useless empty car mileage and led to great irregularities in the distribution of cars. Under special powers granted the Board of Trade late in

¹ See Appendix C, Section 1 (b), and Appendix D.

² The freight equipment of the railway companies themselves amounted in 1913 to 760,000 cars.

1916, all private cars were placed unreservedly at its disposal, "to use those wagons in such manner as they think best in the interests of the country as a whole."¹ The Board of Trade, acting of course at the behest and on behalf of the Railway Executive Committee, thereupon issued a sweeping order in March, 1917, known as the "Private Owners' Wagons (use when empty) Order, 1917,"² which directed the owner of any freight car that might otherwise be sent out empty to follow without question such instructions as the Board of Trade might issue respecting the routing, loading, and unloading of that particular car. Compensation for the use of the car under such circumstances would be agreed upon, or in default of agreement would be determined by reference to the Railway and Canal Commission.

Closely connected with these several moves for the more efficient handling of railway and private freight cars was the elaborate plan for coal distribution put into effect by the Controller of Coal Mines in July, 1917. For the purposes of this plan Great Britain was divided into twenty coal zones or areas. Each area was directed to produce its own coal so far as possible, and to buy coal from or sell coal to adjacent areas only, to the greatest extent that might be practicable. This plan alone was expected to save some 700,000,000 ton-miles annually. In addition, a general pooling arrangement was made as to private coal cars, which virtually placed them in the class of "common user," so far as the distribution of coal was concerned.

¹ See Appendix C, Section 1 (a).

² For this order in full, see Appendix D.

CHAPTER IV

Freight and Passenger Rates

In discussing railway rate changes under war conditions in Great Britain, there is a clean cut distinction between freight and passenger rates. Freight rates have increased but little, if at all, during the war, while passenger rates have been subjected to a number of adjustments all tending to a higher level, while on January 1, 1917, they were increased a flat 50 per cent.

The freight rate situation in England had been under careful survey for several years prior to the war. We have already seen that certain freight rate increases, averaging about four per cent, became effective only a short time before the outbreak of war, and that these increases were designed to offset wage increases granted to obviate the threatened strike of 1911. While this four per cent increase in freight rates went rather generally into effect in the spring of 1914, some features of the increase were protested and submitted to the Railway and Canal Commission for settlement. After the outbreak of war, that body secured the agreement of roads and shippers to hold up the adjustment of some of the matters until after the war, so that the rate situation has not even yet fully cleared up. It may be said with regard to freight rates, then, that the beginning of war saw a slightly higher rate scale recently instituted, and that this scale has remained virtually unchanged ever since.¹

The passenger rate situation was wholly different. Soon after the outbreak of hostilities the Railway Executive Committee began to raise the rate level in various ways, and this process has continued practically to the end of 1917. The first step was to withdraw week-end, excursion, and other special cut rate fares. Round trip reductions were next abolished. Suburban, commu-

¹ Some local adjustments were made, such as in through freight rates between England and Ireland on February 1, 1917, but they were relatively unimportant.

tation, traders' or shippers' and workmen's weekly and monthly tickets—the so called “bread and butter” rates—were left untouched, but other low rate arrangements were nearly all cancelled. This has had the resultant effect of increasing the general level of passenger fares, even though the normal or standard rates remained unchanged. Sleeping car rates have also been increased. Finally, on January 1, 1917, the regular rates for passenger travel were increased one-half.¹ The object of the government in this move, as frankly stated by the Board of Trade,² was to cut down travel rather than to increase railway revenues, although if revenues did increase, the government treasury stood to gain from the change. It is clear that passenger revenues might increase in the aggregate, even if the amount of travel fell off as a result of the higher rates; the decrease in travel under such a condition would not be sufficient to offset the increased revenue.

The traveling public accepted none of these passenger rate changes without complaint and protest, but their protests were unheeded to a great extent. The plea of war's necessities served to explain and justify all departures from normal standards of service, however drastic. Even when traveling men protested in 1917 that the burden of the increased rates of January 1 fell with unusual severity on their shoulders, the government merely suggested that they pass the burden along to the final consumer.

¹ The normal scale of passenger fares in England is as follows: First class, $1\frac{1}{2}$ d. to 2 d. per mile; second class, $1\frac{1}{4}$ d. per mile; third class, 1 d. per mile. A very large part of the passenger traffic ordinarily moves at lower rates, on account of the many special reductions for various purposes.

² The Board's official announcement of December 21, 1916, read in part as follows: “It should be explained that the increase in fares is not intended as a means of increasing the revenue of the railways, but is put into force solely with the object of curtailing passenger traffic, in order to enable the railway companies to comply with the urgent demands that have been made upon them for the conveyance of troops, munitions, and supplies, both in Great Britain and in France.”

CHAPTER V

General Results

Whether the bargain between the British railways and the government was a good one for either side depends very largely on the financial results attained. We know that the railways had their net income and the stockholders their dividends virtually guaranteed; what did the government pay for its military traffic under the arrangement?

Information on a number of points that have been raised in this connection is meager. For example, the government has given no hint as to its procedure in case a road had a deficit in 1913; which was actually the case with a number of the smaller roads. This point was definitely raised by two English statisticians, who asked whether in case of a deficit, even if smaller than in 1913, "railway shareholders can justifiably be asked to convey the large volume of military traffic free of charge, or whether some further rearrangement of the basis of agreement will not be desirable."¹

It may be regarded as the good fortune of the railways—or the misfortune of the government, according to the point of view—that the test year 1913 was a record breaker for the British railways. Their gross revenues in that year were greater than in any previous year by nearly £11,000,000, their net income was the greatest on record by more than £3,500,000, while their rate of return on capital was greater than it had been in nearly a quarter of a century.

The latest report made by the British government as to the amount paid into the railway treasuries, for the purpose of making up deficits in net income, brings the story down to March 31, 1916. Returns for the first eight months under the war

¹ Jarvis and Piper, "The 1915 Outlook," *Railway News*, (London), September 11, 1915.

arrangement (August 4, 1914, to March 31, 1915) showed that there was advanced to the roads during that period the sum of £6,851,957, or about \$33,350,000. During the next twelve months (April 1, 1915, to March 31, 1916) the corresponding payment was £5,879,876, or about \$28,715,000.¹ These payments were made to the Railway Executive Committee to offset the ascertained deficiency in railway net income during the periods named. The aggregate annual revenues of the British railways, judged by the returns for 1913, are about £120,000,000. Had the eight months' period ended March 31, 1915, been normal, the railway revenues of that period would have amounted to two-thirds of £120,000,000, or about £80,000,000. During that period the roads received from the government £6,852,000 under its guarantee, which was equivalent to 8.6 per cent of their normal revenue receipts, while during the year ended March 31, 1916, they received £5,880,000, or 4.9 per cent of a normal year's receipts. These payments by the government were technically payments under its guarantee of net income; actually they represented the amounts turned over by the government to the railways as compensation for military transportation services rendered. What the government paid the railways was from five to ten per cent of what might be regarded as their normal revenues under conditions of peace. Whether the government traffic represented a greater proportion of total railway traffic than five to ten per cent, records do not show; but in view of the tremendous movement of government munitions and supplies and of troops, it would seem unquestionable that such movement has represented a much greater share of the total railway movement than ten, or possibly even twenty or thirty per cent. Differently stated, this seems to indicate that the British government has been enjoying an unusually low rate on the transportation business it has furnished to the railways, and that it drove a good bargain, even on the basis of the peak year 1913.

¹ Report to Parliament by Comptroller and Auditor General, March 23, 1917.

It is the general opinion of students of British railway conditions that the traffic handled during the war has been much greater than in normal times. Some of the ordinary freight and much of the passenger traffic has been handled at higher rates than in peace times, as has already been explained, and whatever added revenues have come from such sources have benefited the government rather than the railways' treasuries. In other words, the low rate on government traffic has been due in part, possibly, to higher rates on other traffic and in part, also, to heavier traffic along certain lines of movement.

Although the government's payments to the roads in 1915 were much lower than in 1914, in fact lower for the whole of the twelve months to March 31, 1916, than for the eight months to March 31, 1915, it is not unlikely that mounting payments to labor and increasing cost of supplies in 1916 and 1917, together with the severe restrictions applied to normal traffic, combined to make the government payments to the railways in those years much larger than they were in 1914 and 1915.

The railways' income returns show actual expenditures, the revenue figure shown being just sufficient to cover the expenses and bring the net income up to the level of 1913. How much of this total revenue was paid to each road by the public and how much by the government is not shown in the returns of the individual railways themselves.¹ To whose advantage the bargain lay will therefore remain an open question until, if ever, the necessary records are available. Some writers maintain that the

¹ Here, for example, is a transcript of the income account of the North Eastern Railway for the year 1914:

	Year ended December 31,	
	1914	1913
	£	£
Receipts, etc., including estimated amount receivable under agreement with the government in respect of control of Railways for the period August 5 to December 31, 1914.....	12,077,414
Expenditures	8,008,277
Net income	4,069,137	4,316,088
Receipts from other sources	143,604	138,880
Total net income	4,212,741	4,454,968

government has had all the better of the arrangement, pointing out that the net income of the roads has remained stationary while profits in other industries have been mounting to dizzy heights. This argument has two offsetting considerations. In the first place, the transportation industry is affected with a public interest, and can not expect profits similar to those of other industries; while in the second place, war profits in other industries have been very heavily taxed, a taxation from which the railways are of course wholly free, since their net income is calculated on the basis of the deduction only of normal taxes in effect before the war.

Another contention has been that the war arrangement would work to the benefit of the roads only if the traffic handled were no greater than that of 1913. That is, the net income of the railways being stationary, an increase in their traffic would mean that they were doing more work without any compensating increase in net return. As it is likely that traffic has very greatly increased over that of normal times, it is argued that the roads have been at a disadvantage under their agreement with the government.

However accurate these arguments and conjectures may be, we have the testimony of government officials that the bargain with the railways has been a good one from the point of view of the public. Chancellor of the Exchequer Bonar Law made the somewhat indefinite statement to Parliament in December, 1916, that the agreement had "involved no financial loss, but probably some gain." He added that the bargain had been a very good one for the state.

The financial results of operation of the twenty-five principal British railways for the four calendar years ending 1916 have been summarized by the London *Statist* as follows:

NET EARNINGS AND PROFITS OF 25 PRINCIPAL RAILWAYS OF GREAT BRITAIN

	1916	1915	1914	1913
Ordinary capital	£305,897,000	£305,854,000	£305,800,000	£305,800,000
Net receipts	43,417,269	43,131,004	43,004,249	44,012,229
Int. and other charges less misc. income....	27,984,415	27,954,421	27,945,330	27,522,457
Net profit	15,432,854	15,176,583	15,058,919	16,489,772
—% Ord. stock.....	(5.04%)	(4.96%)	(4.92%)	(5.39%)
Dividends paid	14,222,805	14,055,696	14,234,800	15,483,548
Do. per cent.....	(4.65%)	(4.60%)	(4.65%)	(5.06%)
Balance	1,210,049	1,120,887	824,119	1,006,224
Special allocations	1,032,000	876,000	806,500	936,500
Balance	178,049	244,887	17,618	69,724
Brought forward.....	1,395,334	1,150,448	1,132,830	1,063,106
Carried forward.....	1,573,383	1,395,335	1,150,448	1,132,830

The average rate of dividend shown in the foregoing table was 5.06 per cent in 1913, fell to 4.65 per cent in 1914, and remained virtually at that level in 1915 (4.60) and 1916 (4.65). The course of specific dividend rates is shown in the following table, also drawn from the columns of the *Statist*, which gives the dividend rate of twenty-five leading British railways in 1913, 1914, 1915 and 1916. Scrutiny of the table brings out the fact that only five of the twenty-five roads were paying as high a rate in 1916 as in 1913, while the remaining twenty roads were on a lower dividend basis. Not a single road had increased its rate over the 1913 level. Many of the roads which reduced or completely passed their dividends in 1914, thus reflecting the uneasiness of the first months of the war, later restored them nearly or quite to the 1913 basis. The stocks included in the table are all ordinary or common stocks, unless otherwise specified.

DIVIDENDS PAID BY 25 PRINCIPAL BRITISH RAILWAYS,
1913-1916

Road	1916	1915	1914	1913
Barry	9.50	9.50	9.50	10.
Caledonian	3.375	3.375	3.375	3.50
Furness	2.25	2.	1.	2.50
Glasgow & South Western Def.	2.125	1.625	2.	2.625
Great Central 5% Pref. 1894.....	2.	1.	nil.	2.
Great Eastern	2.50	2.50	2.50	2.50
Great North of Scotland Def.....	1.	1.	1.	1.50
Great Northern	4.25	4.25	4.375	4.50
Great Western	5.75	5.75	6.	6.25
Highland	2.25	2.25	2.25	2.50
Hull & Barnsley	3.	2.	2.	3.50
Lancashire & Yorkshire	4.50	4.50	4.50	4.50
London & North Western	6.	6.	6.	7.
London & South Western.....	5.50	5.50	5.625	5.875
London, Brighton & South Coast.....	5.	5.	4.75	5.25
London, Chatham & Dover 4½% Pref....	4.50	4.	4.50	4.50
Metropolitan	1.	1.	1.25	1.625
Midland Def.	4.	4.	4.	4.25
North British Def.50	.50	1.	1.25
North Eastern	6.50	6.50	6.50	7.
North London	3.75	3.75	3.75	4.75
North Staffordshire	4.625	4.625	4.75	5.
Rhymney	9.	8.50	8.50	9.
South Eastern	3.75	3.50	3.50	4.
Taff Vale	3.50	3.50	3.75	4.

Railway stocks have fallen considerably in market value, even in the face of fairly well maintained dividends. Whether the same phenomenon would have occurred under a different arrangement, or would have occurred to the same extent is a moot question, but one hardly worth discussing. It is safe to assume that under any conditions of operation the railways could hardly have competed with other industries that were making tremendous war profits. The same competition was going on simultaneously in the United States between the railways and other industries, and in all cases the railways failed to be successful in earning the same rates on investment as industry in general, or in securing capital on the same terms as war favored industries. Yet it is not unlikely that the fall in prices of British railway stocks reflected the uneasiness of the investing public as to the future of the railways.

This fall in market prices on the London exchange may be

indicated by means of the following table, which gives the quotations just prior to the war (July 30, 1914), and at the latest available date (December 12, 1917), of the same twenty-five stocks covered by the preceding table, so far as statistics are at hand covering their market fluctuations.

MARKET PRICE OF STOCKS OF 25 PRINCIPAL BRITISH RAILWAYS

July 30, 1914, and December 12, 1917

(Taken from the *Railway Gazette* of London)

Road	Class of Stock	Market price on	
		July 30, 1914	December 12, 1917
Barry	Def. Ord.	88½	77
Caledonian	Ord.	61	47
Furness	Ord.	34	34¼
Glasgow & South Western....	Def.	36¾	26¼
Great Central	5% Pref.	54½	34¼
	1894		
Great Eastern	Ord.	43½	35
Great North of Scotland.....	Def.	22¾	13½
Great Northern	Def.	44¼	36
Great Western	Ord.	108½	83½
Highland	Ord.	38¾	29½
Hull & Barnsley	Ord.	51	42
Lancashire & Yorkshire.....	Ord.	76¾	64¼
London & North Western....	Ord.	121	89½
London & South Western....	Ord.	105	81
London, Brighton & South Coast	Ord.	94	72¾
London, Chatham & Dover...	4½ Pref.	76½	59
Metropolitan	Ord.	31½	21¾
Midland	Def.	63	55¾
North British	Def.	22¼	13 9/16
North Eastern	Ord.	115½	95¾
North London	Ord.	88½	58¾
North Staffordshire.....	Ord.	79	62
Rhymney	Pref.	93½	67¾
South Eastern	Ord.	69	54¼
Taff Vale	Ord.	70	53¼

British railway stocks had declined considerably in the decade just preceding the declaration of war with Germany, and this decline continued with little change, so that in December, 1917, the quotations were from 20 to 40 per cent lower than on July 30, 1914, just before the outbreak of war, and this in spite of the fact that most of the stocks have maintained their dividends at nearly the pre-war level. To instance a few striking examples from the foregoing table, North Western stock sold at 121 at the

end of July, 1914, while on December 12, 1917, it was quoted at $89\frac{1}{2}$. Similarly, Great Western stock fell from $108\frac{1}{2}$ in 1914 to $83\frac{1}{2}$ in 1917, and South Western from 105 to 81. That is, while the average rate of dividend for twenty-five representative railways was 4.65 per cent in 1916 as compared with 5.06 per cent in 1913, a decrease of less than one-tenth, the market value of representative railway stocks was falling from 20 to 40 per cent.

APPENDICES

APPENDIX A

Personnel of the Railway War Organization in the United States

THE AMERICAN RAILWAY ASSOCIATION

SPECIAL COMMITTEE ON NATIONAL DEFENSE

Executive Committee—The Railroads' War Board

Fairfax Harrison, Chairman,
President, Southern Railway System.
Howard Elliott,
Chairman Committee on Intercompany Relations, New
York, New Haven & Hartford Railroad.
Hale Holden,
President, Chicago, Burlington & Quincy Railroad.
Julius Kruttschnitt,
Chairman Executive Committee, Southern Pacific Com-
pany.
Samuel Rea,
President, Pennsylvania Railroad.
E. E. Clark,
Interstate Commerce Commission, ex officio.

GENERAL COMMITTEE

Fairfax Harrison, General Chairman
George Hodges, Assistant to General Chairman
J. E. Fairbanks, Secretary.

Northeastern Department

J. H. Hustis, Temporary Receiver,
Boston & Maine Railroad, Chairman.
H. M. Biscoe, Vice President,
Boston & Albany Railroad.
Howard Elliott, Chairman Committee on Intercompany Re-
lations,
New York, New Haven & Hartford Railroad, ex officio.
E. J. Pearson, President,
New York, New Haven & Hartford Railroad.
Morris McDonald, President,
Maine Central Railroad.

Eastern Department

- L. F. Loree, President,
Delaware & Hudson Company, Chairman.
- Elisha Lee, Acting Vice President and General Manager,
Pennsylvania Railroad.
- W. G. Besler, President and General Manager,
Central Railroad of New Jersey.
- Samuel Rea, President,
Pennsylvania Railroad, ex officio.
- A. H. Smith, President,
New York Central Lines.
- A. W. Thompson, Vice President,
Baltimore & Ohio Railroad.

Southeastern Department

- W. J. Harahan, President,
Seaboard Air Line Railway, Chairman.
- E. H. Coapman, Vice President,
Southern Railway System.
- Lyman Delano, Vice President,
Atlantic Coast Line Railroad.
- R. V. Taylor, Vice President and General Manager,
Mobile & Ohio Railroad.
- W. A. Winburn, President,
Central of Georgia Railway.

Central Department

- R. H. Aishton, President,
Chicago & Northwestern Railway, Chairman.
- E. E. Calvin, President,
Union Pacific Railroad.
- Hale Holden, President,
Chicago, Burlington & Quincy Railroad, ex officio.
- C. H. Markham, President,
Illinois Central Railroad.
- G. L. Peck, Fourth Vice President,
Pennsylvania Lines West of Pittsburgh.
- E. D. Sewall, Vice President,
Chicago, Milwaukee & St. Paul Railway.
- G. T. Slade, First Vice President,
Northern Pacific Railway.

Southern Department

- W. B. Scott, President,
Southern Pacific Company, Texas-Louisiana Lines,
Chairman.
B. F. Bush, President,
Missouri Pacific Railroad.
Julius Kruttschnitt, Chairman Executive Committee,
Southern Pacific Company, ex officio.
C. E. Schaff, Receiver,
Missouri, Kansas & Texas Lines.
T. M. Schumacher, President,
El Paso & Southwestern Company.

Western Department

- Wm. Sproule, President,
Southern Pacific Company, Pacific System, Chairman.
J. D. Farrell, President,
Oregon-Washington Railroad and Navigation Company.
R. S. Lovett, Chairman Executive Committee,
Union Pacific System.
E. P. Ripley, President,
Atchison, Topeka & Santa Fe Railway.
L. C. Gilman, President,
Spokane, Portland & Seattle Railway.
C. M. Levey, President,
Western Pacific Railroad.

SUBCOMMITTEES

Commission on Car Service

- C. M. Sheaffer, Gen'l Supt. Transportation,
Pennsylvania Railroad, Chairman.
W. L. Barnes, Supt. Transportation,
Chicago, Burlington & Quincy Railroad.
W. C. Kendall, Supt. Transportation,
Boston & Maine Railroad.
P. H. McCauley, Supt. Transportation,
Northern Pacific Railway.
G. F. Richardson, Supt. Transportation,
Southern Pacific Company.
J. A. Somerville, Gen'l Supt. Transportation,
Missouri Pacific Railroad.

D. E. Spangler, Gen'l Supt. Transportation,
Norfolk & Western Railway.

C. B. Phelps, Supt. Transportation,
Louisville & Nashville Railroad.

Military Equipment Standards

J. T. Wallis, Gen'l Supt. Motive Power,
Pennsylvania Railroad, Chairman.

C. E. Chambers, Supt. Motive Power,
Central Railroad of New Jersey.

C. A. Lindstrom, Assistant to President,
Pressed Steel Car Company.

F. W. Mahl, Director of Purchases,
Southern Pacific Company.

Peter Parke, Chief Engineer,
The Pullman Company.

R. E. Smith, General Supt. Motive Power,
Atlantic Coast Line Railroad.

C. B. Young, Mechanical Engineer,
Chicago, Burlington & Quincy Railroad.

Military Transportation Accounting

A. H. Plant, Comptroller,
Southern Railway System, Chairman.

M. P. Blauvelt, Comptroller,
Lehigh Valley Railroad.

G. R. Martin, Vice President and Comptroller,
Great Northern Railway.

A. D. McDonald, Vice President and Controller,
Southern Pacific Company.

C. B. Seger, Vice President and Comptroller,
Union Pacific System.

C. I. Sturgis, General Auditor,
Chicago, Burlington & Quincy Railroad.

John Carstensen, Vice President,
New York Central Railroad.

Military Passenger Tariffs

E. L. Bevington, Chairman,
Transcontinental Passenger Association, Chairman.

F. C. Donald, Commissioner,
Central Passenger Association.

W. H. Howard, Chairman,
Southeastern Passenger Association.

- C. L. Hunter, Vice Chairman,
Trunk Line Association.
W. L. Pratt, Chairman,
New England Passenger Association.

Military Freight Tariffs

- L. Green, Vice President,
Southern Railway System, Chairman.
E. B. Boyd, Chairman,
Western Trunk Line Association.
L. E. Chalenor, Chairman,
Southeastern Freight Association.
R. H. Countiss, Chairman,
Transcontinental Freight Bureau.
F. A. Leland, Chairman,
Southwestern Tariff Committee.
C. C. McCain, Chairman,
Trunk Line Association.
E. Morris, Chairman,
Central Freight Association.

Materials and Supplies

- H. B. Spencer, Vice President,
Southern Railway System, Chairman.
W. E. Hodges, Vice President,
Atchison, Topeka & Santa Fe Railway.
F. W. Mahl, Director of Purchases,
Southern Pacific Company.
W. H. Myers, Vice President,
Pennsylvania Railroad.
J. W. Taylor, Assistant to President,
Chicago, Milwaukee & St. Paul Railway.
George G. Yeomans, Purchasing Agent,
New York, New Haven & Hartford Railroad.

Express Transportation

- D. S. Elliott, Vice President,
American Express Company, Chairman.
J. B. Hockaday, Vice President and General Manager,
Southern Express Company.
F. S. Holbrook, Vice President,
Wells-Fargo & Company Express.
H. E. Huff, Vice President,
Adams Express Company.

GENERAL OPERATING COMMITTEE OF EASTERN RAILWAY
EXECUTIVES

(Appointed November 26, 1917)

- A. W. Thompson, Vice President,
Baltimore & Ohio Railroad, Chairman.
- Carl R. Gray, Chairman and President,
Western Maryland Railway.
- G. L. Peck, Fourth Vice President,
Pennsylvania Lines West of Pittsburgh.
- Elisha Lee, Acting Vice President and General Manager,
Pennsylvania Railroad.
- P. H. Crowley, Vice President,
New York Central Railroad.
- A. T. Dice, President,
Philadelphia & Reading Railway.
- A. J. Stone, Vice President,
Erie Railroad.

APPENDIX B

Regulation of the Forces Act, 1871 (Great Britain)

34 & 35 Vict. Cap. 86. An Act for the better Regulation of the Regular and Auxiliary Land Forces of the Crown; and for other purposes relating thereto (so far as relates to Railways). (17th August, 1871.)

POWER OF GOVERNMENT ON OCCASION OF EMERGENCY TO TAKE POSSESSION OF RAILROADS

- 16. When her majesty, by order in council, declares that an emergency has arisen in which it is expedient for the public service that her majesty's government should have control over the railroads in the United Kingdom, or any of them, the secretary of state may, by warrant under his hand, empower any person or persons named in such warrant to take possession in the name or on behalf of her majesty of any railroad in the United Kingdom, and of the plant belonging thereto, or of any part thereof, and may take possession of any plant without taking possession of the railroad itself, and to use the same for her majesty's service at such times and in such manner as the secretary of state may direct; and the directors, officers, and servants of any such railroad shall obey the directions of the secretary of state as to the user of such railroad or plant as aforesaid for her majesty's service.

Any warrant granted by the said secretary of state in pursuance of this section shall remain in force for one week only, but may be renewed from week to week so long as, in the opinion of the said secretary of state, the emergency continues.

There shall be paid to any person or body of persons whose railroad or plant may be taken possession of in pursuance of this section, out of moneys to be provided by parliament, such full compensation for any loss or injury they may have sustained by the exercise of the powers of the secretary of state under this section as may be agreed upon between the said secretary of state and the said person or body of persons, or, in case of difference, may be settled by arbitration in manner provided by "The Lands Clauses Consolidation Act, 1845."

Where any railroad or plant is taken possession of in the name or on behalf of her majesty in pursuance of this section, all contracts and engagements between the person or body of persons whose railroad is so taken possession of and the directors, officers, and servants of such person or body of persons, or between such person or body of persons and any other persons in relation to the working or maintenance of the railroads, or in relation to the supply or working of the plant of such railroad, which would, if such possession had not been taken, have been enforceable by or against the said person or body of persons, shall during the continuance of such possession be enforceable by or against her majesty.

For the purposes of this section "railroad" shall include any tramway, whether worked by animal or mechanical power, or partly in one way and partly in the other, and any stations, works, or accommodation belonging to or acquired for the working of such railroad or tramway.

"Plant" shall include any engines, rolling stock, horses, or other animal or mechanical power, and all things necessary for the proper working of a railroad or tramway which are not included in the word "railroad."

APPENDIX C

Special War Powers Granted to Board of Trade (Great Britain)

DEFENCE OF THE REALM REGULATIONS, 7^B. POWERS AS TO
RAILWAY TRAFFIC AND FARES. (DECEMBER 13, 1916)
(FEBRUARY 23, 1917)

(1) The Board of Trade may, for the purpose of making the most efficient use of railway plant or labour, with a view to the successful prosecution of the war, make orders for all or any of the following purposes, namely:—

- (a) for enabling the Board of Trade to take possession of any private owner's wagons and to use those wagons in such manner as they think best in the interests of the country as a whole, on such conditions as to payment, use, and otherwise as may be provided by the order:
- (b) for enforcing the prompt loading or unloading of wagons, by making failure to load or unload in accordance with the order an offence and for enabling wagons which are not promptly unloaded by the consignee to be unloaded, and their contents to be dealt with, at the risk and expense of the consignee in manner provided by the order:
- (c) for curtailing any statutory requirements as to the running of trains or affording other facilities on certain lines or at certain stations, or for requiring the disuse of any such line or station, in cases where the curtailment or disuse appears to the Board of Trade to be justified by the necessity of the case:
- (d) for restricting or prohibiting certain classes of traffic (including the carriage of passengers' luggage) on railways either absolutely or subject to any conditions for which provision is made by the order:
- (e) for modifying any statutory requirements with respect to the maximum amount of passenger fares:

(2) If any person acts in contravention of or fails to comply with any of the provisions of an order so made, he shall be guilty of a summary offence against these regulations.

(3) Any order may be made so as to apply generally to all railways or to any class of railways or to any special railway.

(4) Any order of the Board of Trade under this regulation may be revoked, extended, or varied, as occasion requires.

APPENDIX D

Orders of Board of Trade (Great Britain) Under Defence of the Realm Regulations, 7^{B1}

XI.—ORDERS AS TO RAILWAY TRAFFIC AND FARES UNDER REGULATION 7^B

The Railways (Passengers' Luggage) Order, 1916. Dated December 21, 1916.

Whereas by Regulation 7^B of the Defence of the Realm (Consolidation) Regulations, 1914 (inserted in those Regulations by an Order in Council, dated the 13th day of December, 1916), it is amongst other things provided as follows:

The Board of Trade may, for the purpose of making the most efficient use of railway plant or labour, with a view to the successful prosecution of the war, make orders for all or any of the following purposes, namely:—

. . . (d) for restricting or prohibiting certain classes of traffic (including the carriage of passengers' luggage) on railways either absolutely or subject to any conditions for which provision is made by the order.

Now, therefore, in pursuance of their powers under the said regulation and of all other powers enabling them in that behalf, the Board of Trade hereby order as follows:—

On and after the 1st day of January, 1917, the Railway Companies of Great Britain may refuse to carry, as passengers' luggage, luggage exceeding in all 100 pounds in weight for each passenger.²

This Order may be cited as the Railways (Passengers' Luggage) Order, 1916.

A. H. STANLEY.

¹ See Appendix C, page 139.

² Limitation on Passengers' Luggage—The special acts, etc., of the various companies provide for the carriage free of charge of a specified amount of passengers' luggage. For certain of the main lines and for light railways, the amounts were 120 lbs. 1st class, 100 lbs. 2d class, and 60 lbs. 3d class, but for certain lines these amounts were raised by acts of the last 20 years or so to 150, 120, and 100 lbs. respectively.

The Railways (Passenger Fares) Order, 1916. Dated December 21, 1916.

Whereas by Regulation 7^B, etc:—

The Board of Trade may, for the purpose of making the most efficient use of railway plant or labour, with a view to the successful prosecution of the war, make orders for all or any of the following purposes, namely:—

. . . (e) for modifying any statutory requirements with respect to the maximum amount of passenger fares.

Now, therefore, etc., the Board of Trade hereby order as follows:—

On and after the 1st January, 1917, the railway companies in Great Britain may charge in addition to the passenger fares contained in the lists exhibited at the stations at the date of this Order a sum equal to one-half of such fares, or where the fare is not contained in such list they may charge one-half more than the maximum fare which would be chargeable but for this Order, and all such lists and all passenger tickets on which the fares are printed or written shall have effect as if the fares stated were increased by the additional sum so charged.

This Order may be cited as the Railways (Passenger Fares) Order, 1916.

A. H. STANLEY.

The Detention of Wagons and Sheets (England and Wales) Order, 1917, dated March 16, 1917, made by the Board of Trade.

1917. No. 246.

Whereas by Regulation 7^B of the Defence of the Realm Regulations the Board of Trade have power, for the purpose of making the most efficient use of railway plant or labour, with a view to the successful prosecution of the war, to make orders, amongst other things, for enforcing the prompt loading or unloading of wagons by making failure to load or unload in accordance with the order an offence:

Now, therefore, etc., the Board of Trade hereby order as follows:—

1. On and after the 1st April, 1917, the trader responsible for the loading or unloading of any merchandise (excluding coal, coke and patent fuel) conveyed or to be conveyed by railway shall load, unload, or cause to be loaded or unloaded, and tender to, or place at the disposal of the Railway Company the wagon employed together with the covering sheet or sheets, if any, within such number of days after the day on which the wagon and sheet or sheets have been placed at the disposal of the trader as is specified in the Schedule hereto.

2. (Defines "trader.")

3. (Prohibits traders from using equipment for their own internal purposes.)

4. If a trader acts in contravention of, or fails to comply with, any provision of this Order, he is guilty of a summary offence against the Defence of the Realm Regulations.

5. Nothing contained in this Order shall prejudice or affect the right of a Railway Company to recover demurrage or other charges on wagons or sheets or the liability of a trader therefor.

6. This Order shall apply to England and Wales, and may be cited as the Detention of Wagons and Sheets (England and Wales) Order, 1917.

A. H. STANLEY,
President of the Board of Trade.

Board of Trade,
16th March, 1917.

Schedule

Number of Days Allowed for Loading or Unloading Merchandise (excluding Coal, Coke and Patent Fuel)

(a) Wagons supplied empty for loading.

At Stations, Private Sidings, Docks, Wharves, etc.

Wagon to be loaded and tendered to Railway Company for conveyance within one day, exclusive of the day on which the Wagon is placed at the trader's disposal.

(b) Loaded Wagons after conveyance.

At Stations.

Wagon to be unloaded and placed at Railway Com-

pany's disposal within two days exclusive of the day of receipt by the trader of notice of arrival.

At Ports. (Shipment traffic only.)

Wagon to be unloaded and placed at Railway Company's disposal within three days exclusive of the day of arrival.

At Private Sidings, Docks, Wharves, etc.

Wagon to be unloaded and placed at Railway Company's disposal, if empty, within two days, or if reloaded, within three days, exclusive in either case of the day on which the Wagon is placed at the trader's disposal.

The number of days to be allowed for the return of any covering Sheet or Sheets to be the same as for Wagons.

The term "day" in this Schedule means the twenty-four hours beginning at 6 a.m., excluding the twenty-four hours beginning at 6 a.m. on a Sunday morning.

The Detention of Wagons and Sheets (Scotland) Order, 1917, dated March 16, 1917, made by the Board of Trade.

1917. No. $\frac{247}{S.40}$

(Similar to No. 246, just cited, but applies to Scotland.)

Schedule

Number of Days Allowed for Loading or Unloading Merchandise (Schedule same as for England and Wales.)

The Unloading of Wagons (England and Wales) Order, 1917, dated March 16, 1917, made by the Board of Trade.

1917. No. 248

Whereas by Regulation 7^B of the Defence of the Realm Regulations the Board of Trade have power, for the purpose of making the most efficient use of railway plant or labour, with a view to the successful prosecution of the war, to make orders,

amongst other things, for enabling wagons which are not promptly unloaded to be unloaded and their contents to be dealt with at the risk and expense of the trader in manner provided by the order :

Now, therefore, etc., the Board of Trade hereby order as follows :

1. If a wagon on any Railway is not unloaded by the trader within the time shewn in the Schedule to this Order, the Railway Company may cause the wagon to be unloaded and the contents thereof to be warehoused or stored at the owner's risk, in accordance with any directions given for the purpose by the Board of Trade.

2. Any expenses incurred by the Railway Company in unloading the wagon and any cartage, warehouse or storage charges shall be paid by the trader, and, in addition to any other remedy available, the goods in respect of which the expenses are incurred may be detained until those expenses and charges are paid.

3. The provisions of this Order with respect to the unloading of wagons shall be in addition to and not in derogation of any other provisions for enforcing the prompt loading and unloading of wagons.

4. Neither the trader nor any other person shall obstruct, interfere with or impede the exercise by the Railway Company of the powers given by this Order.

5. Any person acting in contravention of, or failing to comply with, any of the provisions of this Order is guilty of a summary offence against the Defence of the Realm Regulations.

6. For the purpose of this Order the term "trader" includes the consignor, consignee, transferee, or other person at whose disposal the contents of a wagon may be held. All notices referred to in this Order may be given in writing or verbally or sent by post or by telegram or by telephone.

7. This Order shall apply to England and Wales, and may be cited as the Unloading of Wagons (England and Wales) Order, 1917.

A. H. STANLEY,
President of the Board of Trade.

Board of Trade,
16th March, 1917.

Schedule

Number of Days for Unloading Merchandise (excluding Coal, Coke and Patent Fuel.)

At Stations

Two days exclusive of the day of receipt by the trader of notice of arrival.

At Ports (Shipment Traffic only)

Three days exclusive of the day of arrival.

At Private Sidings, Docks, Wharves, etc.

Two days exclusive of the day on which the Wagon is placed at the trader's disposal.

The term "day" in this Schedule means the twenty-four hours beginning at 6 a.m., excluding the twenty-four hours beginning at 6 a.m. on a Sunday morning.

The Unloading of Wagons (Scotland) Order, 1917, dated March 16, 1917, made by the Board of Trade.

1917. No. $\frac{249}{S.41}$

(Similar to No. 248, just cited but applies to Scotland.)

Schedule

Number of Days for Unloading Merchandise. (Similar to that for England and Wales.)

The Private Owners' Wagons (Use when Empty) Order, 1917, dated March 16, 1917, made by the Board of Trade.

1917. No. 250.

Whereas by Regulation 7^B of the Defence of the Realm Regulations the Board of Trade have power, for the purpose of making the most efficient use of railway plant or labour, with a view to the successful prosecution of the war, to make orders,

amongst other things, for enabling the Board of Trade to take possession of any private owners' wagons and to use those wagons in such manner as they think best in the interests of the country as a whole on such conditions as to payment, use and otherwise as may be provided by the Order:

Now, therefore, etc., the Board of Trade hereby order as follows:—

1. Where a private owner's wagon would otherwise be sent on a journey empty the Board of Trade may take possession of the wagon for that journey, and give such directions with respect to the cases in which possession is to be so taken and the use and loading of a wagon of which possession is so taken as they think fit.

2. Where possession is so taken of a wagon, there shall be paid to the owner for the use of the wagon such amount as may be agreed or as may be determined, in default of agreement, by the Railway and Canal Commission or by an Arbitrator appointed by that Commission.

3. The owner of any wagon and any other person affected by directions given under this Order shall comply with any directions so given and give all reasonable facilities for carrying out those directions.

4. Any person acting in contravention of or failing to comply with, any of the provisions of this Order is guilty of a summary offence against the Defence of the Realm Regulations.

5. This Order shall apply to Great Britain, and may be cited as the Private Owners' Wagons (Use when Empty) Order, 1917.

A. H. STANLEY,
President of the Board of Trade.

Board of Trade,
16th March, 1917.

*Restrictive Measures Ordered by Railway Executive Committee,
January 1, 1917*

Notice is hereby given that the following alterations in passenger-train travel, as applying to the railways in Great Britain, will come into force on and from January 1, 1917:

(a) **Passenger-train services.**—The passenger-train services will be considerably curtailed and decelerated. For details see the company's time-tables and notices.

(b) **Reservation of seats, compartments, etc.**—The reservation of seats and compartments, and saloons for private parties, will be discontinued.

(c) **Sleeping and dining cars.**—The running of sleeping and dining cars will be curtailed.

(d) **Through coaches.**—The running of certain slip coaches and through coaches off main-line trains to branch lines will be discontinued.

(e) **Prohibition of conveyance of motor cars, carriages, etc.**—Road vehicles, such as motor cars, carriages, show vans, etc., will not be accepted for conveyance by passenger train.

(f) **Increase of fares.**—All passenger fares, except workmen's tickets (daily and weekly), season, traders' and zone tickets, will be increased by 50 per cent.

(g) **Cancellation of reduced-fare facilities.**—Reduced-fare facilities will in certain cases be discontinued. See announcements by individual companies.

(h) **Interavailability of tickets.**—Passengers holding ordinary season or traders' tickets covering points directly served by two or more companies' lines will be allowed to travel, for the throughout journey only, by any route so available.

In cases where through tickets have been issued and there is no direct through service, a passenger will be permitted to complete the journey by a recognized alternative route.

These arrangements will not apply to local residential services unless specially authorized.

(i) **Limitation in weight of luggage accompanying passengers.**—The railway companies will not undertake to give assistance in the handling of passengers' luggage.

Subject to certain exceptions, the amount of ordinary personal luggage allowed free of charge will be 100 pounds, irrespective of the class of ticket held, and no passenger will be permitted to take more than 100 pounds weight of luggage by train.

By order
THE RAILWAY EXECUTIVE COMMITTEE.

London, December, 1916.

APPENDIX E

Proclamation of the President Taking Possession of the Railways

As this monograph goes to press the proclamation of the President of the United States, dated December 26, 1917, has appeared, under which the President has taken possession of all the railroads of the United States under the powers conferred by the Army Appropriation Act of August 29, 1916. (See page 39 of this monograph.)

By this proclamation the President has appointed Secretary of the Treasury William G. McAdoo as Director General of Railroads. On December 31, Mr. McAdoo assented to the desire of the Railroads' War Board to bring its organized activities to a close, and appointed an advisory board consisting of John Skelton Williams, Comptroller of the Currency; Hale Holden, President of the Chicago, Burlington and Quincy Railroad and former member of the Railroads' War Board; Henry Walters, Chairman of the Board, Atlantic Coast Line Railroad; Edward Chambers, Vice President of the Atchison, Topeka and Santa Fe Railway and head of the Transportation Division of the United States Food Administration; and Walker D. Hines, Chairman of the Executive Committee of the Atchison, Topeka and Santa Fe Railway. Mr. Hines has been appointed Assistant to the Director General.

The proclamation of the President follows:

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA A PROCLAMATION

Whereas the Congress of the United States, in the exercise of the constitutional authority vested in them, by joint resolution of the Senate and House of Representatives, bearing date April 6, 1917, resolved:

That the state of war between the United States and the Imperial German Government which has thus been thrust upon the United States is hereby formally declared; and that the President be, and he is hereby, authorized and directed to employ the entire naval and military forces of the United States and the resources of the Government to carry on war against the Imperial German Government; and to bring the conflict to a successful termination, all of the resources of the country are hereby pledged by the Congress of the United States.

And by joint resolution bearing date of December 7, 1917, resolved:

That a state of war is hereby declared to exist between the United States of America and the Imperial and Royal Austro-Hungarian Government; and that the President be, and he is hereby, authorized and directed to employ the entire naval and military forces of the United States and the resources of the Government to carry on war against the Imperial and Royal Austro-Hungarian Government; and to bring the conflict to a successful termination, all the resources of the country are hereby pledged by the Congress of the United States.

And whereas it is provided by section 1 of the act approved August 29, 1916, entitled "An act making appropriations for the support of the Army for the fiscal year ending June 30, 1917, and for other purposes," as follows:

The President, in time of war, is empowered, through the Secretary of War, to take possession and assume control of any system or systems of transportation, or any part thereof, and to utilize the same to the exclusion, as far as may be necessary, of all other traffic thereon for the transfer or transportation of troops, war material, and equipment, or for such other purposes connected with the emergency as may be needful or desirable.

And whereas it has now become necessary in the national defense to take possession and assume control of certain systems of transportation and to utilize the same to the exclusion, as far as may be necessary, of other than war traffic thereon for the transportation of troops, war material, and equipment therefor, and for other needful and desirable purposes connected with the prosecution of the war;

Now, therefore, I, WOODROW WILSON, President of the United States, under and by virtue of the powers vested in me by the foregoing resolutions and statute, and by virtue of all other powers thereto me enabling, do hereby, through Newton D. Baker, Secretary of War, take possession and assume control at 12 o'clock noon on the twenty-eighth day of December, 1917, of each and every system of transportation and the appurtenances thereof located wholly or in part within the boundaries of the continental United States and consisting of railroads, and owned or controlled systems of coastwise and inland transportation, engaged in general transportation, whether operated by steam or by electric power, including also terminals, terminal companies, and terminal associations, sleeping and parlor cars, private cars and private car lines, elevators, warehouses, telegraph and telephone lines, and all other equipment and appurtenances commonly used upon or operated as a part of such rail or combined rail and water systems of transportation; to the end that such systems of transportation be utilized for the transfer and transportation of troops, war material and equipment, to the exclusion, so far as may be necessary, of all other traffic thereon, and that so far as such exclusive use be not necessary or desirable, such systems of transportation be operated and utilized in the performance of such other services as the national interest may require and of the usual and ordinary business and duties of common carriers.

It is hereby directed that the possession, control, operation and utilization of

such transportation systems hereby by me undertaken shall be exercised by and through Wm. G. McAdoo, who is hereby appointed and designated Director General of Railroads. Said Director may perform the duties imposed upon him, so long and to such extent as he shall determine, through the boards of directors, receivers, officers, and employees of said systems of transportation. Until and except so far as said Director shall from time to time by general or special orders otherwise provide, the boards of directors, receivers, officers, and employees of the various transportation systems shall continue the operation thereof in the usual and ordinary course of the business of common carriers, in the names of their respective companies.

Until and except so far as said Director shall from time to time otherwise by general or special orders determine, such systems of transportation shall remain subject to all existing statutes and orders of the Interstate Commerce Commission, and to all statutes and orders of regulating commissions of the various States in which said systems or any part thereof may be situated. But any orders, general or special, hereafter made by said Director shall have paramount authority and be obeyed as such.

Nothing herein shall be construed as now affecting the possession, operation, and control of street electric passenger railways, including railways commonly called interurbans, whether such railways be or be not owned or controlled by such railroad companies or systems. By subsequent order and proclamation, if and when it shall be found necessary or desirable, possession, control, or operation may be taken of all or any part of such street railway systems, including subways and tunnels; and by subsequent order and proclamation possession, control, and operation in whole or in part may also be relinquished to the owners thereof of any part of the railroad systems or rail and water systems, possession and control of which are hereby assumed.

The director shall, as soon as may be after having assumed such possession and control, enter upon negotiations with the several companies looking to agreements for just and reasonable compensation for the possession, use, and control of their respective properties on the basis of an annual guaranteed compensation, above accruing depreciation and the maintenance of their properties, equivalent, as nearly as may be, to the average of the net operating income thereof for the three-year period ending June 30, 1917, the results of such negotiations to be reported to me for such action as may be appropriate and lawful.

But nothing herein contained, expressed, or implied, or hereafter done or suffered hereunder, shall be deemed in any way to impair the rights of the stockholders, bondholders, creditors, and other persons having interests in said systems of transportation or in the profits thereof to receive just and adequate compensation for the use and control and operation of their property hereby assumed.

Regular dividends hitherto declared, and maturing interest upon bonds, debentures, and other obligations, may be paid in due course; and such regular dividends and interest may continue to be paid until and unless the said director shall, from time to time, otherwise by general or special orders de-

termine; and, subject to the approval of the director, the various carriers may agree upon and arrange for the renewal and extension of maturing obligations.

Except with the prior written assent of said Director, no attachment by mesne process or on execution shall be levied on or against any of the property used by any of said transportation systems in the conduct of their business as common carriers; but suits may be brought by and against said carriers and judgments rendered as hitherto until and except so far as said Director may, by general or special orders, otherwise determine.

From and after twelve o'clock on said twenty-eighth day of December, 1917, all transportation systems included in this order and proclamation shall conclusively be deemed within the possession and control of said Director without further act or notice. But for the purpose of accounting said possession and control shall date from twelve o'clock midnight on December 31, 1917.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done by the President, through Newton D. Baker, Secretary of War, in the District of Columbia, this 26th day of December, in the year of our Lord one thousand nine hundred and seventeen, and of the independence of the United States the one hundred and forty-second.

WOODROW WILSON.

By the President:

ROBERT LANSING,
Secretary of State.

NEWTON D. BAKER,
Secretary of War.

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